The Journal of the American Medical Association

VOL. XVI. CHICAGO, JUNE 27, 1891. No. 26

ORIGINAL ARTICLES.

REPORT ON AN EPIDEMIC OF CEREBRO-SPINAL MENINGITIS.

Read in the Section of the Practice of Medicine and Physiology, at the Forty-second Annual Meeting of the American Medical Association, held at Washington, D. C., May, 1891.

BY J. S. NOWLIN, M.D.,

OF SHELBYVILLE, TENN.

In presenting the subject of Cerebro-Spinal Meningitis, the first thought I offer is that our nomenclature in this as in many other diseases leads to an erroneous view of the pathology and treatment.

Our authors have almost universally written as though the inflammatory action found in the coverings of the brain and spinal column was the original lesion to be combated. It will not be necessary, for the purposes designed in this paper, to deny the fact that an inflammatory action may be found in many cases.

The error, as I conceive it to be, and to which I would direct attention, is that the inflammation, if it does exist, in a given case, is not the disease to be treated, but a sequence.

It is only necessary to call attention to the great number of deaths occurring within five days, with no exudation in these tissues evincing inflammation. It is a self-evident proposition that the cause of death is not inflammation.

Realizing the thorough knowledge of the members of this Association with the literature of this subject, I shall not burden you with quotations to prove this and other facts which I shall present. I mention however, that Dr. Alfred Stille, alluding to this question, says, "There ought to be no doubt whether epidemic cerebro-spinal meningitis should be classed with general diseases or with inflammation. It is excluded from the latter class by the total absence of any tangible external cause, as well as by its frequent fatal termination before the characteristic signs of inflammation have had time to form, or because the peculiar type of the disease prevents their development." It is clear to my mind that it is a non-inflammatory trouble and that the inflammation is only concomitant.

I remark further that the impress of the cause, whatever it may be, is made upon the nerve centres, but before noticing directly the etiology, I submit the history of five cases which I saw in 1888.

In December, Mr. H., aged 44, was attacked. He had not been well for two or three weeks, suffering each day with pains in shoulder and neck, and in arms and back. He kept up work on his farm, and attributed his pain to rheumatism. On Saturday he came to Shelbyville, and returned home, a distance of four miles. During the day his nose bled freely. This had occurred at different times previously. He complained somewhat the same way on Sunday, at 8 P.M. had a chill, and head, neck, and eyes pained him intensely, and he suffered excessive pain in his knee joints. His throat was sore, and in less than an hour he was delirious and almost entirely deaf. Dr. A. P. Ryall was called to see him and found a bounding pulse, temperature 100°, and he could be kept in bed only by the greatest effort of three strong men. He gave him bromides with heavy mercurial purgatives, and large doses of morphia. He cupped him and poured large quantities of well-water on his head. I saw him at eleven o'clock Monday night, after he had been sick twenty-four hours. He was hardly conscious of his surroundings, his mind was entirely obscured, and he was deaf. He could see with difficulty and there was ptosis of the lid of left eye. One pupil was much more dilated than the other, and both responded to light slowly. He was continuously tossing and when still for a moment, was on the side and never on the back. There was constant desire to micturate, but the urine was voided with difficulty. Red spots appeared on his face, body and arms from the size of a pin's head to that of a five cent piece. His knuckles and wrists were especially red, and the skin in the highest state of hyperæsthesia; pressure upon the hand producing contraction of the muscles of the face. There was an herpetic eruption on the lips; the head was slightly drawn backward; he had distressing nausea and vomiting from the beginning.

We gave him six drops of veratrum viride every three hours and ten grains of quinine every hour until six in the morning.

Although he vomited frequently, we thought

he had retained most of the quinine. At that hour his symptoms were greatly improved. He was rational and could see fairly well, though one eye squinted. His stomach was quiet and he had slept some. He drank some milk and had a free and copious action from the bowels. The quinine was suspended until evening, the veratrum was not given after four in the morning. Morphia, potassium bromide and tincture of gelseminum were given through the day. He passed through the day Tuesday much better than Monday, but as night approached his ugly symptoms all returned, and notwithstanding the quinine and all other available means were pressed through the night, it was quite evident on Wednesday morning that he must die, which he did that night at nine o'clock.

On the following Friday afternoon the little daughter of Mr. H., aged 5 years, apparently in good health, and out in the yard at play, came hurriedly to her mother complaining of pain in the region of the umbilicus. She soon had shivering followed by pain in the head and neck, pulse 140; breathing rapid, with an occasional sigh; temperature 103°, delirium and sick stomach; opisthotonos marked; skin hyperæsthetic; blind in one eye from infiltration of the cornea, which was perfectly white. She had a red eruption. She was bathed in warm water, given gelseminum, quinine in large doses, and nothing left undone that promised relief. She died on the following Monday night.

On Tuesday her brother, 13 years old, had a chill, followed by pains in nape of neck, sick stomach, headache, sore throat, pain in back and a peculiar pain about the joints of the lower limbs. He was given quinine and calomel, and recovered in a few days with but little trouble. He had a similar epistaxis to that of his father, but there was no eruption. This family lives on the side of a considerable hill. The front of the house is three or four feet above the surface while the rear rests flat on the ground.

The soil on the south side and in the rear of the house was at that time continually damp. The drinking water was, for the most part, from a spring which had been dry during the summer months. Long preceding this it had been walled with wood, which at this time was in a state of decay. The washings of soil, leaves and grass, and every conceivable thing had lodged within this enclosure for years. When the stream began to run in Autumn it was very sluggish. Here, in my opinion, is the source of the sickness in this family.

On March 6th, 1889, Wm. G., aged 21, was attacked with shivering, followed by intense pain in the head, neck, back, and especially the bowels. His knee-joints were painful and he had sore throat. He had been quite unwell for several days preceding this, and his nose had bled several times. The cold stage was followed by contraction of the muscles of the arms and hands, spells of difficult and panting breathing were frequent, his pulse and temperature were normal.

He was boisterously delirious, had sick stomach, spots on the face, herpes labialis. He was given anodynes, bromides and calomel. He also had large doses of quinine and morphia. The morphia did not affect him pleasantly. In eight hours he was given 80 grains of quinine. He also had every four hours one drop of carbolic acid and three drops of tincture of iodine in water. He had large quantities of cold water poured on his head at first, but it was soon noticed that hot water had a more desirable effect, as it quieted him for the time being. He recovered in twelve days. I may mention that after being up a few days and walking a quarter of a mile he had a relapse in which many of the first symptoms recurred. His sister had the same symptoms, but not so severe, and she also recovered.

On March 24, 1889, G. E., aged 21, living in Shelbyville, had a chill followed by a fever, pain in the head, neck, back and limbs, especially in the calves of the legs and knee-joints, hyperæsthesia of the skin, sick stomach, temperature 103°, pulse 100, tongue broad and coated. He had red spots on both hands, particularly the knuckles, and on the wrists and body. I saw him at 10 P.M. of the 24th; at that time he was only partially delirious. He had 10 grains of calomel and 40 grains of quinine during the night, with sufficient morphia to keep him quiet. On the 25th his temperature was lower and his pulse 90, pain in head more intense, patient somewhat stupid, considerable deafness, and muttering delirium.

He was given bromides, gelseminum, ergot and calomel. The tincture of iodine and carbolic acid mixture was also given. Quinine was pressed as rapidly as possible. On the afternoon of the 26th he had a convulsion, and during the night the convulsions recurred several times. His right side was paralyzed. He died on the afternoon of the 29th, having been sick five days.

These cases were of the most malignant type. Quite a number of cases more mild were treated during the months of January, February and March. They had the erratic pains which were felt in different parts of the body, headache, and pain in the nape of the neck and lower limbs. Many cases had redness of skin on hands and wrist; some had fever three or four days, others much shorter time. I could if necessary give their history in detail. There can be no doubt that the original lesion of this trouble is to be found in the nerve-centres. The rational signs point unmistakably in that direction, and the physical symptoms lead the same way. The impress of the poison, whatever it may be, is made

originally on the nervous system. I conclude from observations made not only in the years 1888–1889, but from the cases that I treated in the years from 1860 to 1863, that the real cause of this disease is malaria. The symptoms of malarial blood poison are as protean in their manifestations as the shades of the chamelion.

The three cases in the family of Mr. H. covered the extremes of these manifestations. The prodromata in the father's case was clearly indicative of nerve lesion, the same as usually produced by malaria.

The shifting and shooting pains in the body, the headache, pain in back and limbs, all point in that direction.

The epistaxis was evidently dependent on malarial toxæmia.

A bleeding nose in the early history of a fever is strong evidence of malarial origin. Herpes labialis is also often observed in the milder types of malarial trouble. If we take the three common types of malarial fever, intermittent, remittent, and pernicious, we have extremes wide enough to cover all the phenomena and peculiarities of the so-called cerebro-spinal meningitis. The young man, Mr. C., had just one week previous to his fatal attack, the most intense pains in his legs and knee-joints; the red eruptions on the knuckles of his hands. This all subsided within twenty-four hours and he was at his usual occupation for the succeeding week. I observed this periodic return of the symptoms in several cases. While the ordinary types of malaria are developed in the autumn and spring, and seldom in the winter, it is true that the pernicious cases are as apt to be developed in February and March as at any other season. I do not think the fact that cerebro-spinal meningitis has been observed in mid-winter, is sufficient argument against its malarial origin. If I have succeeded in showing some facts, proving that inflammation is not, and should not, be the overshadowing symptom, and that it must not control the treatment, and further, if the cause is found in malaria, then the line of treatment is plain.

The practitioner who has confronted this dreaded disease, and who has looked through the pages of the best authorities, must feel that he goes into the battle with an uncertain guide and a trembling hand. Uncertainty as to cause, and an evident want of confidence in the remedies recommended, mark the written history of cerebro-spinal meningitis.

A disease so bold and rapid, and fatal in its results, must be met by no faltering hand. It is no new thought that malaria is the cause, but I insist that the fact has not been fully recognized, and that the treatment, both prophylactic and curative, has not been thoroughly tested because of this want of recognition.

No disease of malarial origin can be satisfactorily treated upon general principles. It is a specific disease and requires specific treatment. Quinine is the antidote, and without, no success can be expected. There are many adjuvants which must be used; calomel in large and repeated doses, venesection and veratrum, are among the best arterial and nerve sedatives, and at the same time they favor the absorption of other medicines, and the elimination of blood-poison.

The bromides, chloral, and morphia are to be used freely. The quinine should be used hypodermically in not less than 5-grain doses, and at not longer intervals than one hour; the bisulphate is the best for this purpose and can readily be dissolved in warm water. There are a few cases which cannot be controlled in every epidemic of any disease, but they all have their prodroma, and if the medicines are given in time many cases can be prevented from reaching the grave type. This is eminently true of cerebro-spinal meningitis. It is as a prophylactic that quinine is to be the greatest boon. When it is threatening to be epidemic the physician should warn his patients that the first shooting pain and the earliest uneasy aching, the slightest headache or slightest arthralgia, must be met with quinine. It is here that the inflammatory theory has done its greatest harm by withholding the hand in the fear of exciting it.

Let it be remembered that malaria is killing the patient, and not inflammation. If the patient survives the deadly touch of the blood-poison then there will be plenty of time to treat the inflammation, which is one of the sequalæ of the perverted blood-vessels caused by an influence exerted through the nervous system.

REPORT OF SIX CASES OF ABDOMINAL SECTION.

Read In the Section of Obstetrics and Diseases of Women at the Forty-second Annual Meeting of the American Medical Association, held at Washington, D. C., May, 1891.

BY A. C. WILSON, M.D.,
OF YOUNGSTOWN, OHIO.

Case 1.—Mrs. J. W., aged 28 years, married ten years, has had two children, elder 8 years, younger 6 years. She has had two miscarriages, one four years and the other two years ago. Her labors were always long and tedious, and her recoveries slow. Menstruated first at the age of 15 years. Always suffered great pain at these times. Since the birth of the last child, she has been a constant sufferer from severe pelvic pain, and a dull aching in the lower part of the back, rendering her able to walk but a short distance. She was treated one year for the pains with tonics and nervines, and also locally by painting the vault of the vagina with tr. iodine, and with glycerine tampons. She received no relief by

this treatment. Her suffering was so constant and extreme that the removal of the uterine appendages was proposed and gladly consented to. On October 30, 1889, assisted by Dr. H. A. Kelly, of Baltimore, Md., the tubes and ovaries were both removed. She made a rapid recovery without an unfavorable symptom. There has been no pelvic pain since the operation. She got up the fifteenth day, and in six weeks began doing her own work. She is now able to walk without discomfort, and is well in every respect.

Case 2.—Mrs. F., aged 49 years, married and has had eleven children, all still-born, except two who died soon after birth. Two years before I saw her, she received an injury in the lower part of the abdomen which caused an inflammation, and confined her to bed for several weeks. Since then she suffered constant pain in that region, and a small tumor could be indistinctly made out at that point in the abdominal cavity. She was treated for her trouble by her family physician for a long time with no benefit. An exploratory operation was performed Nov. 20, 1889, to determine the character of her trouble. The small tumor proved to be a mass of adhesions matting together the omentum and bowels. The less firm adhesions were broken up by the fingers, freeing the bowels as much as possible from constrictions. The abdominal cavity was well washed out with hot distilled water, and carefully sponged out, and the abdominal wound closed. The patient had no previous preparation, and had partaken of a hearty meal but a couple of hours before the operation. The surroundings of the patient were bad, the rooms small and filthy, but she made a good recovery from the operation. Although she still suffers some inconvenience, yet she has been much improved.

Case 3.—Mrs. J. S., aged 28 years, married seven years. Has one child 6 years of age. Has had four miscarriages, the last in February, 1890. She first menstruated at the age of 14. Since the birth of her child she has been a constant sufferer. She was first seen in March, 1890, menstruation was then occurring every two weeks. On examination I found the uterus slightly retroverted, the left ovary enlarged, prolapsed, and very painful to the touch. At that time she was weak and anæmic. Tonics including iron were prescribed. Locally she was treated with iodine and glycerine tampons. Her general constitution became better, but the ovary showed no improvement. Its removal was advised, and consented to, with the understanding that the right one should be left, unless it be found so far diseased as to be entirely useless. The operation was performed May 26, 1890. The adhesions binding the left ovary were broken up and it was removed with the tube. It was about the size of a hen's egg, containing an abscess filling almost the whole ovary with pus. The right ovary, being healthy, was left. The abdomen was closed and she made a rapid recovery. Her menses came on the latter part of June. In July they failed to appear. In August she consulted me about her condition. She had morning sickness; after questioning her closely, I concluded she must be pregnant and advised her to remain quietly at home. After a couple of weeks she became quite comfortable. About the 12th of September, the next day after a ride of several miles over a rough road, in a not easy riding vehicle, I was called to see her. She had severe pain and profuse hæmorrhage; in short I found her suffering from a miscarriage. The membranes came away easily, and in two week's time she was able to be up again. After a couple of months, she began to suffer a great deal of pain in the right ovary, which as yet I have not been able to relieve, and I very much fear that a second operation for the removal of the right ovary will be necessary.

Case 4.—Mrs. E. W. D., aged 30 years, has two children, the elder 7 years, the younger 2½ years. One miscarriage five years ago. Labors have always been protracted and severe, and recoveries slow. She first menstruated at the age of 16, which has always been painful. Has suffered more pain since the miscarriage five years ago. Since the birth of her last child she has menstruated every two or three weeks, constant pain in back and pelvis. Has headache nearly all the time and is very nervous. First examined her in May, 1889. Uterus slightly retroflexed, and both ovaries exceedingly painful to the touch. She was also very weak and anæmic. She was treated with tonics, and also with appropriate local applications for a year. Her general condition was improved, but there was no relief to the pain. In August, 1890, she became very much worse with the pain and was confined to her bed. The removal of the uterine appendages was advised. Consequently, September 18, the operation was performed. Both tubes and ovaries were adhered by bands of adhesions to the surrounding parts, but were easily removed. The ovaries were enlarged but contained no abscesses.

The tubes presented a granular appearance, and exuded a thin bloody pus. The patient made a good recovery, and began doing her own work and caring for a family of five members, the following January, and still continues to be well.

Case 5.—Mrs. M., aged 39 years. Has had four children, the youngest 4 years of age. The last labor very long and difficult, and was followed by puerperal fever, from which she made a slow recovery, which was never complete. Since then she has had constant pelvic pain, and also pain in the lower part of the back, and

menses appearing every two or three weeks. She never was treated for her trouble until the summer of 1890, when she became unable to work, and was confined to her bed. She received appropriate treatment, both local and constitutional, from her physician during the summer and early fall of 1890. She was first seen by me in August. Both ovaries were very painful to the touch, the left one prolapsed and lying behind the uterus. The removal of the tubes and ovaries was advised. October 10, the operation was performed. The ovaries were adherent, but the adhesions were easily separated and both tubes and ovaries were removed. The ovaries were small and sclerotic, the tubes enlarged and exuded a thick yellowish serum. The patient made a good recovery. After three weeks she went home and went to work, caring for her family, which very much retarded her complete recovery. She has continued to improve, until now she is comparatively well.

Case 6.—Miss J. R., aged 20 years. In May, 1889, she had a large cyst of right ovary removed by Dr. A. Kelly. The left ovary at that time was in perfectly normal condition and was not removed. She recovered very nicely from this operation. She was well until July, 1890, when she had an attack of dysentery; after this she complained of severe pain in the lower part of the abdomen and pelvis. She was treated with tonics for some time with little benefit. In August an examination of the pelvis and abdomen was made. Bands of adhesions could be felt in the right ovarian region. These extended from the womb and right broad ligament, and seemed to be connected with the bowels. She complained of much pain in that region, and especially when the bowels were about to move. The uterus was slightly movable, seeming to be fixed by bands of adhesions to the line of the old cicatrix. The right ovary was enlarged, painful, and slightly movable. She grew gradually worse during the latter part of the summer. In the fall she became bed-fast. The pain in the pelvis became so intense that it became necessary to give her opiates for her relief.

On December 27th, laparotomy was performed for her relief. An incision three inches in length was made at the right and close to the old cicatrix. Some difficulty was experienced in opening the peritoneal cavity, because of the adhesions of the bowel and omentum to the old cicatrix. At the right of the uterus, there was a mass of adhesions matting the viscera in this region all together. These were broken up. The stump of the old pedicle from which the cyst was removed two years ago was found, with the ligature about it, but apparently as it was left at the former operation, a year and a half before. This was left as it was. The left ovary and tube were firmly bound down and were removed with difficulty. There was a great deal of hæmorrhage, but the abdominal cavity was flushed with hot distilled water and it soon ceased. The abdominal cavity was then carefully sponged out and closed without a drainage tube. I regretted afterwards that a drainage tube was not used, as there was a great deal of pain and some distension of the abdomen, which gave me a great deal of uneasiness for fear there was more oozing of blood than the peritoneum could take care of. Nevertheless she recovered slowly, and is now nearly well. She suffers no pain and walks about with no inconvenience, and is improving rapidly.

These operations were all, except Case 5, performed at their dwellings. Case 5, was done at the Youngstown City Hospital. The rooms in which the operations were done and where the patients were subsequently cared for, were all carefully cleaned, carpets and furniture removed, all wood work carefully washed with a 1 to 1000 sublimate solution. This was done in all cases except Case 2, which had no preliminary preparations whatever. All except Case 3, previous to the operations, were given saline cathartics and the bowels thoroughly emptied. They were carefully bathed, the abdomen and genitals thoroughly washed in 1 to 1000 sublimate solution. The hands of both the operator and assistant were thoroughly scrubbed with hot water and soap, and then immersed in 1 to 1000 sublimate solution for a few minutes. Nothing but hot distilled water was used in cleansing the abdominal cavity or the wound.

Silk ligatures were used for both the pedicle and the closing of the abdominal wound. These were prepared by boiling for fifteen minutes in distilled water, and then placed in 1 to 1000 sublimate solution for two hours, and preserved in alcohol. Nothing but liquid food was given for a couple of days before the operation, and no food or drink except weak tea was given for two days after the operation. The temperature of none of these cases ever rose above 100. No stitch abscesses occurred in any of the cases.

Hypodermics of morphia were given the first three days after the operation to relieve the pain, except in Cases 1 and 2.

The results obtained in these cases have been entirely satisfactory. Before the operations they were great sufferers, unable to attend to their household duties. To-day they are doing their own work at home, and with the exception of cases 2 and 3 who were greatly improved, are well and happy women.

Youngstown, O., May 1st, 1891.

DR. JAMES N. MARTIN has been appointed to the chair of Obstetrics and Diseases of Women in the University of Michigan, which he has filled since the death of Dr. Dunster.

A CASE OF DOUBLE UTERUS AND VAGINA.

Read in the Section of Obstetrics and Diseases of Women, at the Forty-second Annual Meeting of the American Medical Association, held at Washington, D. C., May, 1891.

BY M. GUHMAN, M.D.,
OF ST. LOUIS, MO.

Mrs. A., 28 years of age, married six years, well developed. First pregnancy four years after marriage—there was nothing unusual during her term of pregnancy. Dr. Langan and I delivered her on February 6, 1889, under the influence of chloroform, of a living female child. It was a breech presentation, and never entered the inferior strait, and followed by a complete inversion of the uterus, which I reported to the St. Louis Medical Society. On April 25, 1890, I was summoned again to deliver her the second time. Upon examination I found it another breech presentation. Labor progressed favorably until entering the inferior strait, and then it became firmly lodged. I sent for Dr. Langan and my son to assist me. Under the influence of chloroform and in position, I proceeded to deliver her. I introduced my fingers in the vagina, but to my surprise I could not detect any child, nor could I find the mouth of the uterus. I could feel a something through a partition, but I did not know what that partition was. I was under the impression that from the change of the position of the woman, and under the influence of chloroform, the uterus with its contents was displaced, and the mouth of the uterus was out of my reach, although thinking that such a state of affairs was impossible. I introduced my finger backwards and forwards, with always the same result. I asked Dr. Langan to make an examination. He also got his finger in the same canal, and we still were not aware that we had to deal with a double vagina and uterus. We could not detect the neck or mouth of the empty uterus No. 2, it was also drawn out of our reach. Being perplexed at finding such unusual complications which we could not account for, we agreed to send for Dr. Mooney, who resided near by. We kept our patient under the influence of chloroform. When Dr. Mooney came, he also got his fingers into the empty vagina. We concluded to make an ocular examination, which revealed a septum arising from the orifice of the urethra, and extending along the median line to the fourchette, completely separating the vagina into two canals. We introduced our hand into the vagina leading to the impregnated uterus, and delivered the woman of a living female child. After delivery the condition of the woman was such that we did not think it prudent to make any further examination. Our patient improved rapidly, and on May 11, 1890, Dr. Mooney and I made another examination, and found things as above described. In each vaginal cavity we found a well developed cervix; we introduced a uterine sound in the left uterus to a depth of 2½ inches. On account of some blood flowing from the uterus after our examination, and only sixteen days after delivery, we abstained from any further examination. Since I introduced a sound in the other (right) uterus, and also found its depth about 2½ inches. From our examination and observation, it seems that both uteruses have been impregnated, the right first, and the left second; she did not menstruate during either pregnancy. It is my opinion that we have more double vaginas and uteruses than we are aware of, because it is only by accident that we find these anomalies. I have treated my patient in my office, after her marriage, for a slight flexion of one of the cervixes, with a speculum, made digital examination, and delivered her once; and I only found her condition by accident at her last confinement. All other such cases of which I have read were found by accident. For the development of anomalies of vaginas and uteruses, I would refer you to some of our text-books.

Gentlemen, I thank you for your kind attention.

REPORT OF A CASE IN WHICH THE CHILD'S ARM BECAME ENGAGED IN THE FENESTRUM OF THE OBSTETRIC FORCEPS.

Read by Title, in the Section of Obstetrics and Diseases of Women, at the Forty-second Annual Meeting of the American Medical Association, held at Washington, D. C., May, 1891.

BY DAN MILLIKIN, M.D.,
OF HAMILTON, O.

Nearly a year ago I attended a woman who had borne four dead children after severe and complicated labors, each time under the care of a different physician. She had also borne one living child, which owed its existence to the fact that it was very small, and, probably, was prematurely born. This woman, half through her sixth pregnancy, came to me, and consented to the induction of premature labor. Thereupon she passed from my notice, changed her plans upon ill advice, and summoned me when labor at term had progressed for two or three hours.

When the cervical tissues were in proper condition, a careful examination of the case was made under an anæsthetic. Finding a head of moderate size above the brim of the pelvis in left occipito-anterior position, I was sure that I could deliver it with forceps in spite of a slight asymmetry, and a shortened antero-posterior diameter of the pelvis. In this opinion I was all amiss, for it was afterwards demonstrated that the child could not be delivered in that position, and it also appeared that it could be delivered easily feet foremost. But this error of judgment is somewhat apart from my present business.

Four fingers were passed, and the forceps were

carefully guided to the sides of the child's head. They were easily locked and manifested no disposition to slip during the attempted extraction of the child. It may also be remarked that they were my pet instruments, with broad blades and strong curves, cephalic and pelvic.

No effort was made to induce pains by traction. The pains were very vigorous but separated by unusually long intervals. For this reason, and because the woman's general condition was excellent, the effort to deliver by forceps was much prolonged.

When, finally, it was determined to essay delivery by podalic version, a state of affairs was presented which, so far as I can learn, was unique in obstetric practice. The upper blade of the forceps—that one which passed to the right side of the woman's pelvis—would not come out! The lower blade was withdrawn first, and without difficulty, but still the other would not come away. Then my hand, passed into the uterus, revealed the fact that the child's right hand had passed through the fenestrum of the blade and that, in fact, the blade hung on the bend of the elbow, as a basket hangs on one's arm. The blade could not have been withdrawn without internal manipulation.

Presently, when the child had been delivered by the feet, it was seen that violence had been done to the forearm alone, and that the injury was near the elbow. No bones were broken, but the soft parts were terribly crunched. Undoubtedly, if the instrument had been long and stiff, and if it had appeared proper to compress the head very severely, the arm would have been completely chewed off.

Endeavoring to draw some warning from such a sorry job, we may note, in the first place, that the accident could only occur when a supra-pelvic application of the forceps is made. To attain the odd position in which I found it, the arm must have lain for a moment with its palmar surface on the convex surface of the forceps blade as it was about to be applied to the head, then the hand must have dropped into the fenestrum, and finally, the forearm must have been flexed upon the arm by the final thrust of the blade home to its position. All of these evolutions require room, and could only occur above the brim.

In the second place, I would remark that the accident cannot possibly be diagnosed unless the head and arm are above the ordinary size. In my case the forceps were easily introduced and locked with the greatest ease; the handles were approximated as much as in the average case; there was no disposition to slip, neither when the forceps were in my hands nor in the hands of my skilled associate, Dr. Geo. C. Skinner; the child's head and the points of the forceps were repeatedly and carefully palpated through the thin abdominal and uterine tissues, and no suspicion of this unique complication arose in our minds. I cannot believe that the most expert and experienced obstetrician could have detected the presence of the arm in the fenestrum until he attempted the withdrawal of the instruments.

For this reason I am in the humor to inquire whether the fenestrum has any reason to exist. What is it good for, anyway? It has been said in most of the systemic treatises that the fenestrum gives lightness to the forceps, but this proposition, which is at first glance very plausible, admits of question. Give to me a solid blade that is admittedly too heavy, and I can lighten it either by cutting out a fenestrum or by grinding it thinner. If I cut out the fenestrum I weaken the blade, past question, and may need to thicken the remaining metal to restore the lost strength. Any instrument shop will furnish samples of forceps which have passed through this line of development; that is to say, they are light blades with generous fenestra and metal altogether too thick. And after all, what signifies weight in obstetric forceps? Ordinary forceps, fenestrated or non-fenestrated, need not weigh more than a pound, and it is easy to make a long pair of crushing instruments with a pound and a half of steel. Surely the brother who cannot carry a pair or two of this weight is not stout enough to be out at night, much less to use forceps.

On behalf of the fenestra it has been said, further, that they permit prominent parts of the head to engage in them—the parietal eminences, for example—in such a manner that the forceps occupy no available room, take a much better hold upon the head, and obviate the tendency to slip. To this it may be responded in the way of argument, that it is a remarkable streak of luck, and nothing but luck, when the prominences on a child's head project into the fenestra. It may be said, further, that forceps rightly chosen and rightly used for the case in hand do not occupy any available room nor, when in use, increase the diameter of the child's head measured between the blades. Fenestrated or non-fenestrated, they *make* room, moulding the head by compressing it to such a degree that were they of double thickness they would find room. And, finally, as to the slipping of the forceps, it may be said that when they show an inveterate tendency to slip, either the forceps or the operator should be changed; there is something amiss in the fit, the application or the manipulation. Fenestra will not prevent slipping when the forceps have not been placed upon the child's head, nor when they are used merely as tractors.

And it may be urged, further, that when we cut fenestra in our forceps we increase the total amount of edge surface. This is a positive disadvantage which should be atoned for by some very great advantage. Examining the head of a

child which has been the subject of a severe forceps extraction, one will find that the narrow rim of metal about the fenestrum has shown a tendency to actually cut into the tissues of the scalp. Not only the outer, convex, marginal edges make their mark, but also, in lesser degree, the inner, concave edges which bound the fenestrum. Looking at such a specimen one would incline to the opinion that the fenestrum is an evil.

But waiving the question as to whether the fenestrum has any reason to exist, I think that my mishap in the case cited gives us reason to cease operating above the brim with forceps having wide fenestra.

EXTRA-UTERINE PREGNANCY.

Read in the Section of Obstetrics and Diseases of Women, at the Forty-second Annual Meeting of the American Medical Association, Washington, D. C., May 5, 1891.

BY DONNEL HUGHES, M.D.,
OF PHILADELPHIA.

In discussing the subject of extra-uterine pregnancy, it is advisable to begin by directing our attention to the locations at which fecundation takes place. There are three sites at which it is supposed to occur, viz.: the Fallopian tubes, the ovaries, and in the peritoneal cavity.

There are several varieties of the three species just alluded to. The tubo-ovarian is that variety in which the germ is arrested in the pavilion (the tube adhering to the ovary).

The tubo-abdominal, in which the germ is arrested in the same place as the tubo-ovarian, but instead of the tube being adherent to the ovary, it is adherent to any of the neighboring viscera.

The tubal-proper is that form in which the germ is arrested in any part of the oviduct between the pavilion and that portion of the Fallopian tube that is surrounded by the uterine walls.

The tubo-uterine, or interstitial variety, is that form of gestation in which the ovum is arrested in the part of the tube that is surrounded by the uterine walls.

Abdominal pregnancy is usually divided into primary and secondary varieties. In primary abdominal pregnancy the germ is arrested in the peritoneal cavity. In secondary abdominal pregnancy the germ is arrested in the Fallopian tube or ovary, and the cyst ruptures and allows the ovum to escape into the abdominal cavity, where it continues to live and develop.

Ovarian pregnancy is that form of gestation in which the ovum is developed in the ovary.

By far the most frequent variety is tubal pregnancy, and the most common causes of this variety are supposed to be inflammation of the mucous membrane that lines the Fallopian tubes and destroys its ciliated epithelium, thereby leaving a denuded surface for the fecundated egg to adhere to; flexion of the tubes, which prevents the ovum from entering the uterus; hernial pouches produced by dilatation of the oviduct. When the impregnated ovum is arrested and remains for any length of time in the tube, the mucous membrane becomes hypertrophied, surrounds the egg, forms a decidua, and a placenta is developed, very similar to that which is found in normal pregnancy. When the product of conception is situated in the free part of the tube, rupture almost invariably takes place before the thirteenth week, and sometimes as early as the fourth or fifth week; when it does occur, it is either into the peritoneal cavity or between the folds of the broad ligament. When rupture takes place into the peritoneal cavity, death is almost certain within a few hours, unless the abdomen is promptly opened, the bleeding vessels secured, and all foreign substances removed. When rupture takes place into the cavity of the broad ligament, the prognosis is not so grave, as the product of conception may be disposed of in several ways, viz.: it may remain between the folds of the ligament, go to full term, and be removed when viable as a living child, or it may die and be absorbed, or it may die and suppurate, and be discharged through the vagina, the rectum, bladder or abdominal walls, or it may lie quiescent as a lithopœdian, or it may become intra-peritoneal through secondary rupture.

Tubo-uterine, or interstitial pregnancy, is of rare occurrence. Rupture usually takes place before the fifth month, and when it does occur it is into the peritoneal cavity.

Ovarian pregnancy undoubtedly has existed, but is extremely rare. A few cases have been recorded. The earliest of which I can find any record is that of M. de St. Meurice in the year 1682. Marinus has reported three specimens, which are in the pathological museum of Wurzburg, which he has examined, and believed them to be impregnated ovaries. J. G. Porter reported a case of ovarian gestation in the year 1853. The autopsy showed the left ovary enlarged and containing a gravid sac, the Fallopian tube on the same side being free from adhesions Kammerer exhibited a specimen of ovarian pregnancy to the Pathological Society of New York in the year 1865. Spiegelberg also records a case of pregnancy in the right ovary.

After carefully reviewing the literature of the subject of abdominal pregnancy, I have arrived at the conclusion that primary abdominal pregnancy has not been proved by any well authenticated cases to have existed; nor does it seem possible for a fecundated ovum to remain for a long enough time in any one position to contract an adhesion that is sufficiently firm for its development; and furthermore, if it did so, its absorption or digestion would be very likely.

I believe that most, if not all, abdominal pregnancies are secondary, fecundation usually occur-

ring in the oviduct, escaping from thence through a rupture into the abdominal cavity, and there becoming adherent to any surface with which it comes in contact.

The uterus in extra-uterine pregnancy is subject to a variety of changes, similar in many respects to those that occur when the product of conception is contained within its cavity. It always undergoes certain changes which prepare it for the reception of the ovum. Its cavity is often lined with decidua, or I might say, *always*, because in many cases it is thrown off in small shreds and is passed without being observed; in other cases it is expelled *en masse*, often leading one to suppose that an abortion is in progress; the cervix frequently contains a plug of thick mucus similar to that found in normal pregnancy. The whole organ becomes more vascular, enlarged and softened—or, in other words, prepares itself for parturition.

The impregnated germ, from the beginning to the end of its growth, is not abnormal in any way, except in its location. A portion of the fœtus may be in the uterus while the remainder is in the abdominal cavity, as in a case reported by M. Mondat,[1] in which the head of the child was in the uterus, while the trunk occupied the Fallopian tube.

Bell narrates a case[2] that was verified by a post-mortem, in which the fœtus was in the uterus and a portion of the placenta was within the Fallopian tube. On the other hand, the placenta may occupy the normal position and the fœtus may be contained within the tube or abdomen, as was shown by Hey,[3] Putna[4] and Hofmeister[5] in separate autopsies where the child was found free in the abdomen, the cord extending through the tube to the interior of the uterus, where the placenta was attached.

A number of cases have been recorded in which fœtuses have been found in hernial sacs. Gouley, Geuth, Muller and others have reported such cases, the greater number of which were found in inguinal hernias.

Twin conception is another variety of extra-uterine pregnancy. It is a very uncommon coincidence to find both children in the same locality; one is generally uterine, while the other is extra-uterine. Normal pregnancy may take place while extra-uterine pregnancy already exists, and gestation advance to full term and labor take place without any unusual occurrence, provided that the pelvic outlet is not obstructed by the extra-uterine fœtus. Gordon reported a case in which a woman gave birth to five living children while carrying one that had become encysted.

The positive diagnosis of ectopic gestation in the early stages is almost impossible in every case. There are no regular symptoms that occur during the first few weeks that are not frequently found in normal gestation. If from any cause one is led to believe, or even to suspect, that anything is unusual, a physical examination should be made. The size of the womb should be compared with the size it should be, at the supposed period of pregnancy. A careful search should be made in the neighborhood of the Fallopian tubes, fundus of the womb and ovaries. If an enlargement is discovered, so much is gained. The question then arises, to what is that tumor due? Is it a pyosalpinx, a hæmatosalpinx, a hydrosalpinx, a subperitoneal fibroma, a cystic ovary or an extra-uterine pregnancy? These questions will have to be decided by an inquiry into the previous history of the case, and by carefully comparing the symptoms of the disease which it might resemble with the symptoms of pregnancy. The size of the tumor should be compared with the size that the fœtal sac should be at the supposed time of gestation. If the following symptoms are present, I think that one is justified in treating the case as extra-uterine pregnancy:

1. A previous history of sterility, or if a long period has elapsed since the birth of the last child.
2. Amenorrhœa followed in six or seven weeks by irregular hæmorrhages.
3. A tumor in either Fallopian tube.
4. Slight enlargement of the uterus, with softening of the cervix.
5. The presence of decidua. The latter symptom is of great importance. A small portion of the decidua, if present, can often be obtained by passing a pair of dressing forceps into the womb, pressing them against its lining, then closing and withdrawing them. Great care and gentleness must be exercised in their introduction, and if the slightest obstruction should be encountered they must immediately be withdrawn.

If, in addition to the foregoing symptoms, there is a plug of thick mucus in the os uteri, morning sickness, enlargement of the breasts with alteration of the areola, one is justified in passing a sound cautiously into the womb for the purpose of ascertaining the presence or absence of a fœtus.

The diagnosis cannot be made with certainty until after the fourth month, when the outlines of the child can be distinguished and the movements felt. Generally, the first time we are called upon to see the case, we find the patient complaining of an agonizing pain in the lower part of the abdomen, with symptoms of shock and internal hæmorrhage, which very clearly tells us that rupture has taken place. If death does not follow, peritonitis, either localized or general, is sure to develop. If the woman survives the attack, it is very likely to be repeated within a short time. When rupture takes place within the folds of the broad ligament, the symptoms are not so severe

[1] Archives Générales de Méd., Tome 11, 2d Series, p. 67.
[2] London and Edinburgh Med. Jour., November, 1845, p. 817.
[3] Med. and Obst. Jour, Vol. viii, London, 1796, p. 341.
[4] Cayaux, loc. citat., p. 590.
[5] Rusto Magazine, 1823, Vol. xv, p. 126.

or alarming; in fact, the pain in some instances has been so slight as not to have been observed by the patient herself. This form of rupture is very rarely, if ever, followed by peritonitis. If the fœtal sac ruptures, the fœtus dies; if it does not rupture, gestation continues until full term, unless it is interrupted by secondary rupture into the peritoneal cavity. If this accident should happen, the symptoms are the same as those that occur in primary rupture into the peritoneal cavity, except that they are much more severe, and death is certain to follow unless operated on immediately. If the fœtus is carried to full term, a spurious labor will set in, and if the woman is not delivered, the child will die.

If our knowledge of the differential diagnosis of the various forms of ectopic gestation was more exact, the treatment would be comparatively simple. If we could distinguish tubal from abdominal pregnancy in the early stages, the former could be relieved and the latter allowed to progress until viable.

Many forms of treatment have been devised and practiced at different times. Among these may be mentioned hypodermic injections of various narcotics and poisons into the fœtal sac, and even into the fœtus itself; syphilization of the mother with the hope of destroying the child; puncturing the sac through the vaginal or abdominal walls and drawing off the liquor amnii; the passage of an electric current through the fœtus with the hope of killing it. It is needless to say that these and many other devices, too numerous to mention, are hazardous to the mother, and in many instances ineffectual in the destruction of the child.

In my opinion, the only sensible and rational treatment in extra-uterine pregnancy is laparotomy. The proper plan of treatment to be pursued in all cases of extra-uterine pregnancy, except those in which the fœtus is contained within the folds of the broad ligament, no matter at what period of gestation, is to open the abdomen and remove the tube that contains the fœtal sac. I will go still further, and say that in a case in which a tumor has been discovered in the tube, and we are led to suspect the existence of extra-uterine pregnancy, an exploratory laparotomy should be performed, and if it is then found that the tube does not contain a fœtus, the tumor, whatever it may be, can be removed. Too much emphasis cannot be laid upon the propriety of early operation, for we all know that the tube is sure to rupture, sooner or later, and, in most cases, cause the death of the woman, if an immediate operation is not performed.

When the fœtus is contained within the broad ligament, it should be allowed to remain there until it becomes viable, unless secondary rupture occurs, or it should die in the meanwhile. When rupture has taken place, the abdomen should be immediately opened, all foreign substances removed, and the bleeding vessels ligated. The peritoneal cavity should be thoroughly irrigated with warm water that has been boiled, and a glass drainage tube placed in the lower angle of the wound. When pregnancy is far advanced, and the child is either viable or dead, its removal becomes necessary. This is best accomplished by abdominal section. The incision should be made directly over the fœtal sac, if possible, as by so doing the fœtus, in many instances, can be removed without opening the peritoneal cavity. The child should be removed from the sac, and the cord cut as close as possible to the placenta. If the placenta be not firmly adherent, it should be removed. If the hæmorrhage from the surface of the sac which contained the placenta cannot be controlled with warm water, a sponge wet with Monsell's solution should be applied to the bleeding surface. This failing, the sac should be packed with a strip of iodoform gauze, the end of which should be brought out at the lower angle of the wound, by the side of a glass drainage tube. In from twenty-four to thirty-six hours the gauze should be removed, and the drainage tube allowed to remain until all discharges have ceased. If the placenta is firmly adherent, it should not be removed.

After thoroughly cleansing the interior of the sac and removing all loose membranes, the stitches should be so arranged that when they are tightly drawn the sac will be air-tight. If at any future time the placenta should show evidences of suppuration, the wound must be reopened, the placenta removed, and the interior of the sac thoroughly irrigated and drained.

It is needless to say that in all these operations the strictest antiseptic precautions should be observed in their minutest details.

ELECTRICITY AS A THERAPEUTICAL AGENT IN THE TREATMENT OF DYSMENORRHŒA AND PELVIC INFLAMMATIONS.

Read at the Annual Meeting of the Illinois State Medical Society, at Springfield, Ill., May 20, 1891.

BY F. J. PARKHURST, M.D.,
OF DANVERS, ILL.
EX-PRESIDENT M'LEAN COUNTY MEDICAL SOCIETY.

As a therapeutical agent, electricity has a wider range of usefulness than any other one agent known to the medical profession to-day. A great deal of good can be done with it when properly and carefully used. The ancients had a limited knowledge of its power to cure disease. Their batteries were furnished them in the form of an electrical fish, the raja torpedo, found in the Mediterranean Sea. Shocks from these torpedoes were often used in the treatment of dis-

ease. Since Galvani discovered galvanism in the year 1786, advancement has been made in the study and use of it. The past sixty years and more, especially the past twenty years, it has received much attention at the hands of the medical profession. The past seven years it has especially been used in the treatment of diseases of women. At the present time it is being lauded to the skies as a panacea by members of the profession, and equally denounced as worthless by others.

One reason for the latter opinion may be found in my own experience with the agent. A short time after commencing the practice of medicine, ten years ago, I purchased a 24-cell combined battery. Used it for two years or more as I know some physicians are using it. In time denounced it as worthless, as any physician will who uses it in a similar way. Was careless about keeping my battery in good condition, did not study the subject thoroughly, was ignorant of its methods of influencing living tissues, of the selective points for applying the electrodes, paid little attention to the strength and duration of the currents employed. Did poor work and received poor results. My battery in time got out of running order for want of proper attention, and was placed at one side in my office, where it was soon covered with dust. For two years or more made no use of it. During this time remarked that I had no use for electricity, and had but little confidence in it as a therapeutical agent, that it did not come up to the claims made for it, and have heard more than one physician make similar remarks during the past year.

In May, 1886, attended the meeting of the American Medical Association, held in St. Louis, and heard a paper read by Dr. F. H. Martin, of Chicago, on Galvanism in Gynecology. It was an excellent paper, and was well and ably discussed. After hearing this paper, came to the conclusion that I knew but very little or nothing at all about electricity, and went home resolved to become better informed on the subject. And I am pleased to-day that I can contribute something, in a practical way, of the benefits to be gained by the proper use and administration of this wonderful agent. To use it successfully, a physician must have one or more of the standard text books on electricity in his library, and study them. He should have a good battery, and keep it in good condition. He should select suitable cases for treatment, and be careful about the strength and duration of the current employed.

I have brought with me the battery and instruments used in the treatment of the cases I am about to report.

A good 24-cell battery will furnish a current of sufficient strength for all purposes, even to breaking down large uterine fibroid tumors. I have here a 50 cell Barrett chloride of silver battery. This battery will run two hours a day for two years, equal to about two cents and a half per day, and furnish a strong current. Next, a milliampèremeter, used to accurately measure the strength of the current. The custom with some physicians, of estimating the strength of the current by the number of cells employed, should never be resorted to, as it is unreliable, and may bring about dangerous results. To produce certain results an accurate strength of current is required, and can only be measured accurately by the milliampèremeter. Next, the abdominal electrodes, which should be large enough to cover the whole abdominal surface from the umbilicus to the pubes. The first abdominal electrode I present is the Apostoli clay electrode, made very easily. Have a tin-smith cut out a piece of zinc 5 or 6 inches long and 3 or 4 wide, and solder on a binding post, get some clay, moisten and mould it to the proper consistence and size, bury the zinc in the clay and cover with thin cotton cloth; it is easily kept moist and warm. The next is the Martin abdominal membrane electrode, a very good substitute for the Apostoli clay electrode. The object in having these electrodes so large is to so diffuse the current that a large dose can be used without pain. The internal or active electrodes are composed of metal, and may be of various shapes and forms to suit the fancy of the operator. There is a difference in the polarity of the internal electrodes that is always well to bear in mind—one coagulating, hardening; the other liquefying, softening. You turn on a very strong current, and apply an electrode to the mucous membrane, which is connected with the positive pole of the battery, and the mucous membrane becomes hardened, as if cauterized with an acid. If a similar current is turned on and the electrode attached to the negative pole of the battery, and applied to the mucous membrane, the effect upon the membrane is that of solution, similar to that produced by caustic alkali. Having a correct understanding of the action of the poles, it is seen that to cure a profuse cervical leucorrhœa, to check and stop profuse uterine hæmorrhage in uterine fibroids and polypoid growths of the uterus, etc., the positive intra-uterine electrode is the one to be used. Where fibroid tumors are to be broken down, a subinvoluted uterus reduced in size, hardened exudates, inflammatory deposits, etc., removed, the negative pole should be employed. Before going into details, let me state that antiseptic precautions in the use of instruments and washing out the vaginal and uterine cavities, should be carried out. The first case I report is one of sterility and dysmenorrhœa.

Mrs. C., married, age 23, consulted me August, 1890, and gave the following history: She had been married four years without becoming pregnant, and was anxious to have children. Menstruation commenced at the age of 15, and was

normal, lasting about four days. About eleven months before marriage, one day while out riding and returning home, on getting out of the buggy, she stepped on the top of the wheel of the buggy and jumped to the ground. She immediately felt as if something had given way in the lower part of her bowels, was taken with a severe pain in the lower part of her back and in her limbs; was unable to walk and had to be helped into the house and to bed, where she remained for three weeks. After this accident, when menstruation came on, it was painful; that she had been slowly getting worse, and at the present time was a great sufferer at her menstrual periods. Her suffering was so great she was compelled to go to bed and take opium to relieve pain. Since marriage, in some ways she had grown worse—she had a bad leucorrhœa, menstruation now lasted seven or eight days, was profuse, leaving her weak and exhausted; almost constant backache, dragging sensations in the pelvis. Life seemed a burden, and at times was gloomy and despondent. She stated that she had consulted several different physicians, had received constitutional and local treatment with only temporary relief. An examination revealed an enlarged and engorged cervix pressing against the bladder, a profuse leucorrhœa, a retroverted uterus bordering on second degree of displacement, bound down by adhesions and immovable. My diagnosis was displacement with inflammation, plastic exudation, resulting in adhesions, brought on by the injury done when jumping from the buggy. The repeated congestions incident to married life, and also from menstruation, constantly aggravated the trouble and made it worse. Galvanism was the remedy prescribed to relieve pain, and break up the adhesions binding down the displaced uterus. The large abdominal electrode was selected for the external or positive electrode. The negative vaginal electrode, covered with wet absorbent cotton, was crowded well up into Douglas' cul-de-sac, in close proximity to the displaced portion of the uterus. These electrodes being held firmly in their places, the current was gradually turned on until it reached a strength of 100 milliampères. This treatment lasted five minutes, and the current turned off. These applications were continued every other day for the first three weeks, and three times a week the remaining six weeks of the treatment, in all twenty-nine treatments. At the end of the second week menstruation came on, with decided relief in all the symptoms. The relief from pain was such that no opium was required. Menstruation hardly lasted six days, and the amount of the flow greatly checked. The second menstruation was free from pain, and the flow stopped the fifth day. An examination revealed the uterus to be movable, so much so it could nearly be replaced to its normal position. The third menstruation was normal in every respect. One month later, she became pregnant.

Case 2.—Miss N., age 21, came under my care March, 1889, and gave the following history: She began menstruating at 14 years, and has never missed a menstruation since. Her menstruations were always accompanied with pain, and for the past three years the pain had been getting worse, and "that she lived in terror of each menstruation." Her suffering was so great she had used anodyne rectal suppositories, and later morphine and chloroform. During the inter-menstrual period she had bearing-down pains over lower part of abdomen. Her appetite was poor, bowels constipated, and over-exertion was sure to bring on a severe nervous headache. She had been treated by several physicians. An examination was consented to, which revealed a retroflexed uterus; the ovaries were low, enlarged, tender and movable. The treatment used was the galvanic current. The abdominal clay electrode was attached to the positive pole, the vaginal electrode to the negative. The current employed was mild, and of longer duration from thirty M.A., and used twenty minutes every day. After each application of electricity, a small roll of iodoform gauze was crowded up against the fundus uteri, the patient directed to remove it the next day, and use a carbolized warm water vaginal injection every second day before coming for treatment. This treatment was continued every day, with the exception of three days, until April 12, when menstruation came on with but very little pain, the patient remaining quiet in bed. April 19 the patient returned, and the same treatment carried out. The ovaries were not so tender and higher up, nearer their normal position. The next menstrual period was free from pain, she not being obliged to remain in bed. The treatment was continued two weeks longer after this menstrual period. On examination the ovaries had regained their normal position, and the uterus found in a better position than at first. The patient had gained in flesh, had a good appetite, and could stand fatigue without bringing on the nervous headaches. Two years have passed since this patient received her last treatment, and she tells me that "her menstrual periods have been free from pain, that life seems a paradise to what it used to be, and that she is stronger and healthier than at any time since menstruating."

Case 3.—Mrs. M., married, consulted me June, 1890; has had four children; date of last confinement four years ago. Never had a tedious labor. Three years ago had typhoid fever, complicated with cellulitis confined to right side. Convalescence very slow. Menstruation did not come on for six months after getting up from the fever, and was very painful. The pain being principally in the ovarian region on the right side. She stated that for two and three days preceding menstruation, and during the first day of the flow

the pain was intense, and sometimes when the flow checked the pain would come back as bad as ever, and remain so until she flowed again. Morphine in large doses only gave relief. She took her bed sometimes a day or two preceding menstruation and remained during the entire time. Every menstrual period left her exhausted and very nervous. She also complained of frequent painful micturition and severe and annoying pruritus vulvæ often preceding and lasting a week or more after menstruation. She had received constitutional and local treatment from different physicians; said she believed there was no help for her and that she was tired of doctoring. An examination revealed the uterus symmetrically enlarged nearly twice the normal size. The uterine sound passed to the depth of three and three-quarters inches; the cervix lacerated to the left almost to cervico-vaginal junction, and the mucous membrane of the vagina was somewhat thickened and pale in color. There was considerable tenderness over the right ovary and there was thickening of the broad ligament. Considering the case carefully, the character of the pain as connected with the flow, I concluded that the right ovary must be surrounded by non-elastic layers of an exudate thrown out at the time of the cellulitis. Treatment was commenced by using galvanism in strong doses. The large abdominal membrane electrode attached to the positive pole, and the vaginal electrode applied to the right of cervix uteri, and crowded well up in close proximity to the right ovary as possible. The object being to produce absorption of the exudate enveloping the ovary. Treatment was given four times a week the first three weeks, and three times a week for the last five weeks. At the end of the third week menstruation came on with decided relief in all the symptoms. There was but little pain, no trouble about the bladder and slight pruritus vulvæ. The second menstruation was normal. The fourth menstruation passed with no abnormal symptoms, and two months ago she informed me that there had been no return of pain at her menstrual periods, and I have every reason to believe the patient permanently cured.

Case 4.—Was called to see Mrs. N. November last, 1890. She had been married eleven years, had three children, one miscarriage, and one premature birth. The premature birth had occurred nine weeks previous to my seeing her, and during all this time she had been confined to the bed. I found her pale, anæmic, nervous, no appetite, very restless at night, suffering with cystitis, which was mechanical; two or three times a week she was obliged to take morphine to obtain relief from pain which was confined to lower part of abdomen. An examination revealed a large flabby subinvoluted uterus crowding against the bladder, causing the cystitis. There was a great amount of soreness over the lower part of the abdomen, but very little pressure causing pain. The patient had been unable to lie on either side. The os was large, patulous, and the sound readily passed to the depth of four and a quarter inches. She had received good nursing and been on good tonic treatment, and also received ergot and vib. three times a day. I stopped giving all medicines of any kind, and directed that the bladder be washed out once a day with one quart of warm water in which 2 gm. borac acid had been previously dissolved. Galvanism was the treatment advised and carried out. The large abdominal clay electrode was attached to the positive pole and the uterine cup electrode to the negative pole. This electrode was firmly applied to the cervix uteri. The current used was mild, 30 M. A., and used twenty minutes every day. After the first treatment the patient remarked: "I feel as if I could go off to sleep. I have faith this is going to help me." The improvement was rapid and very gratifying. After the third treatment the patient could lie on either side and the pain and soreness rapidly disappeared. In seven days the patient had a good appetite, slept well at night, became cheerful, and by the tenth day was able to sit up in a chair for the first time since becoming sick. The treatments were continued every day for four weeks, and three times a week for four weeks. Forty treatments in all. At the time of the last treatment the womb had returned to nearly its natural size. I saw the patient last week, she was looking well, had increased in weight, was able to walk and ride out.

I have selected and reported these four cases because they were cured by galvanism. No other remedy being employed in their treatment and cure by me. My list contains others permanently cured, some greatly benefited, and some not helped at all. The fact is mentioned in connection with each case that they had all received at different times first-class treatment, constitutional and local, with no relief. In the first case there was a displaced uterus bound down by inflammatory exudates, interfering with the function of the organ. In the second case repeated congestions had resulted in hypertrophy and displacement of the ovary. In the third case an unyielding exudate interfered with the function of the right ovary, and severe pain the result until the congestion was relieved by a flow of blood from the uterus. In the fourth case the uterus from some predisposing or exciting cause, or both, had failed to contract to normal size, and remained a large, soft, flabby mass, filling the pelvic cavity. The indication in each case was the removal of the products of congestion and inflammation, and the cure of pain the result. This was accomplished by the passage of electricity through the diseased tissues. I wish to state in closing, that I am not in favor of

using strong currents as I used to be. My experience and observation have led me to believe that the same electrolytic action can be obtained from a mild current for a longer time than a strong current for a short time, and with less dangerous and more pleasant effect upon the patient. There is an interesting field of observation here, and with the means we have at hand for actual measurement of the currents by the M.A., we can, before many months, arrive at definite conclusions as to the effect of the strong and mild currents in the treatment of our cases.

I am no specialist, but a general practitioner in a small town, in McLean County, and only use electricity as it is indicated in general practice. Some of the most gratifying results in my experience as a practitioner have come from an intelligent and proper use of this agent.

REPORT OF A CASE OF ABDOMINAL UTERINE TUMOR.

BY EDWARD BORCK, A.M., M.D.,
OF N. ST. LOUIS, MO.

History.—Mrs. C. N., a farmer's wife from Kansas, was sent to me by her family physician in May, 1885; she was 41 years of age, five feet 6 inches high, natural weight 96 lbs., brown hair mixed with gray, blue eyes. Had always been in good health, quiet temperament, menstruation regular, of late years some leucorrhœa. A small tumor in pelvic cavity, of about two years' growth.

Diagnosis.—Fibroid of the uterus. Ovaries not implicated.

Refused to operate, advised the patient to go home and wait until her climacteric period had passed; if by that time the tumor had not increased very much, and she would be well otherwise, then the tumor would very likely cease growing, or even atrophy, after she had passed the critical period, and need no interference. If, however, the tumor should become larger, to return, and we would see what would be best to be done.

May 15, 1891, six years later, Mrs. C. N. arrived again at my Private Surgical Home. She came determined to have the tumor removed and get well; she could not stand it any longer, something must be done for her, as the tumor had increased in size considerably. Menstruation had ceased for some time.

Examination.—Patient's weight 121 lbs., circumference over umbilicus 48 inches. Otherwise the patient was in very good condition, excellent spirits, tranquil, and not the least afraid.

Diagnosis before Operation.—Fibro-cystic tumor of the uterus, left ovary not involved, right ovary may be cystic degenerated, no adhesions except to pedicle. Taking all the circumstances into consideration, I advised the operation.

May 17, at bedtime, she took calomel gr. x, followed the next morning with a Seidlitz powder.

May 18, before retiring, a warm bath.

May 19, in the morning, a cup of milk and a slice of bread; a copious enemata of warm soap water, which cleaned the bowels thoroughly. A vaginal douche of warm water was given, and she was put to bed. At 11 o'clock morphine sulph. gr. ss, and warm water bottles to limbs and body to keep her moist, she slept. At 12 o'clock she took the chloroform with ease. I operated in my usual manner, Drs. Wm. W. Graves and Henry Summa assisting; present, Dr. L. W. Gerling, Mr. Heideman, M.S., and Miss Henrietta A. Stoffregen, the nurse.

After opening the abdomen by an incision extending from the pubis to about 1½ inch beyond the umbilicus, a large round, solid tumor was exposed. No adhesions anywhere, the ovaries not involved, though both degenerated. On the right side of the tumor were several small bunches or protrusions from the tumor, and more soft or cystic-like, and closely surrounding the right ovary. The uterus, elongated, formed the pedicle proper, the fundus involved in the tumor.

I ligated both ovaries with a single silk ligature, separated the peritoneal covering all around, bringing into view the pedicle proper, introduced through the uterine pedicle one of my cyst elevators (double needle), tied a strong silk ligature below the needle and around the pedicle, amputated ovaries and tumor with a pair of serrated scissors, stopped all hæmorrhage thoroughly, which was very little—she lost in all not over one ounce of blood. The abdominal cavity was cleansed and flushed with the artificial serum. I then touched or amalgamated all the blood-vessels with the actual cautery, and stitched the two peritoneal folds together with interrupted fine silk ligatures, covering and inclosing the pedicles, again flushed the cavity with warm artificial serum, and closed the abdominal wound with deep-seated and superficial silk ligatures, thus obtaining a clean shut peritoneal pack. Dressed abdomen in the usual manner. The patient rallied well.

Progress of the Case.—In the evening after the operation, her temperature was one degree below normal, pulse weak but regular, respiration slow. She had been a little nauseated for a few hours, but had suffered hardly any pain, and slept at intervals.

May 20, morning. Temperature 100.5°, pulse 90, respiration 24. Some accumulation of gas in the intestine. A glycerine rectal suppository relieved her almost immediately.

Evening. Temperature normal, pulse 72, respiration 18. Otherwise in a good condition and spirits. From this time on she kept at this stage and slowly improved. Evacuation of bladder and bowels natural.

On the third day, May 22, I removed every

other deep-seated ligature; the wound was closed and perfectly dry. By the seventh day all the ligatures were out, not a drop or sign of any pus, patient was up. On the fourteenth day the patient walked out to the dining-room and took her meal with the family. For the first two days after the operation she was fed on oatmeal gruel, beef-tea, brandy, ice, according to circumstances. After that milk, meat, eggs, vegetables, etc., in addition.

The tumor weighed 20 lbs. 7 ozs. I presented it to the St. Louis Medical Society, with a short history, on the evening of the 23d of May, and made a section of the tumor in the presence of the members, and would say that to all appearance the mass was colloid, showing beautifully the uterine tissue, that is the upper part of the fundus of the uterus, from where the growth originated, with both degenerated ovaries attached.

General Remarks.—It will be observed that I took all possible aseptic precautions. Nothing but clean distilled warm and cold water was used, and the artificial serum for the abdominal cavity, instruments and ligatures. In my early operations I followed a strict antiseptic plan, carbolic acid spray, etc. In time I have learned better, and instead prefer the aseptic method, cleanliness and discipline. No opium, no medicine of any kind was used, nor was it needed in this case. This patient was an admirable patient — quiet, obedient, good spirits, with faith in her recovery. I am especially pleased that she took my advice in 1885.

This is my sixty-ninth case of ovarian or uterine tumors operated upon, exclusive of all other laparotomies for other causes. Out of my first twenty-five cases I lost four patients; out of the next twenty-five cases I lost but one patient. See report in September, 1885.

Remarks on Abdominal Surgery, with Fifty Cases. Read before the Mississippi Valley Medical Society, Evansville, Ind., September, 1885. In full in the *Medical Record*, September 26, 1885, Vol. xxviii, No. 13, whole No. 777. W. Wood & Co., Publishers, 56 and 58 Lafayette Place, New York City. Abstract from same in JOURNAL OF THE AMER. MED. ASSOC., Vol. v, No. 14, October 3, 1885, 65 Randolph St., Chicago, Ill. *Med. and Surg. Reporter*, November 28, 1885, Vol. liii, No. 22, Philadelphia, Pa.

Out of last nineteen cases up to date I lost two patients; these two were operated upon at their houses. The other seventeen cases were operated upon and kept under my own immediate and constant observation at my Private Surgical Home, no death.

I would also refer the interested reader to my papers on:

Ovarian Tumors: At what Stage of the Disease is it the Proper Time to Operate? *Cincinnati Obstetric Gazette*, March, 1880. 101 Inquiries.

Ovarian Tumors (Two Lectures): Diagnosis of, and Operation. Part I. *Cincinnati Obst. Gaz.*, September, 1883.

Ovarian Tumors. Diagnosis and Operation. Second and Revised Edition, with Six Wood-cuts. Pamphlet.

Cyst Elevator: Description of, and Method of Operating. Three Illustrations. *Cincinnati Obst. Gazette*, February, 1879; also Illust. Vierteljahrschrift der ärztlichen Polytechnick. Bern u. Leipzig.

I cheerfully admit that I carefully select my cases I operate upon.

ON THE TREATMENT OF FIBROID TUMORS IN THE WOMB BY THE INJECTION OF ERGOT INTO THEIR SUBSTANCE.

Read before the Illinois State Medical Society, May 21, 1891.

BY J. SCHENCK, M.D.,
OF MT. CARMEL, ILL.

Fibroid growths in the walls of the womb produce such serious symptoms and cause so great an amount of suffering that I believe that any method of treatment which has afforded relief or produced a cure should be placed before the profession.

It has been repeatedly demonstrated that fibroid tumors in the walls of the womb may be either checked in their growth, strangulated until local necrosis is produced, or forced out of the uterine walls by contractions produced by the free and long continued use of ergot. The methods by which the remedies have been administered are, by hypodermatic injections; by the mouth; or by suppositories per rectum or vaginum.

The inoculation of a virus to prevent or modify threatened diseases, has been practiced for about two hundred years. The most familiar examples are those against small-pox, anthrax, hydrophobia, cholera, scarlet fever, and finally, tuberculosis. Hypodermatic medication has been on trial for forty-eight years, and is to-day recognized as one of the speediest methods of carrying medicines into the system.

The profession has also had extensive experience with injections of various substances into diseased tissues and abnormal growths, as in the treatment of carbuncle, hæmorrhoids, hernia, hydrocele, goiter, nævus and vascular tumors. But I have been unable to find record of a remedy having been injected directly into the morbid growth itself in the treatment of fibroid tumors of the womb. I have administered it in this manner in several cases with satisfactory effects, and in this communication propose to present a summary of the results:

Case 1.—The first case occurred in 1880, in the person of a German woman. She was about 52 years old; otherwise in good health, had borne five children; the last, twenty years previous. On examination I found a tumor in the posterior wall of the womb, of about the size of a goose-

egg. It had tilted the womb backwards until that organ was entirely inverted; the os being high up under the pubes, while the fundus and tumor had fallen backwards and downwards, and were dangling between the thighs, a constant source of pain and annoyance. I injected one-half drachm doses of fluid extract of ergot into the substance of the tumor, once a week, for two months; at the end of this time the tumor began to suppurate and in a short time had entirely discharged. After the suppuration ceased, I replaced the womb, and retained it in position with a large sized Hodge's pessary; which the patient wore for several months, when it was removed. She is to-day a healthy old lady and suffers no inconvenience from her former trouble.

Case 2.—I was called, in December, 1886, in consultation, to visit Mrs. C. She was then 42 years old, had always lived a quiet, industrious life on a farm. Menstruation commenced at 14 years. She was married at 36; bore her first and only child in her 40th year. Menstruation had always been normal up to the pregnancy; but five months afterward metrorrhagia began, which gradually grew more profuse, although ergot was given freely by the mouth. An examination revealed a well defined intra-mural tumor in the anterior wall of the womb, encroaching on the cervix, and about the size of an ordinary orange. I advised injections of ergot into the tumor. Mr. J. D. Kingsbury, the attending physician, substantially sends me the following report:

"I injected half-drachm doses of Squib's fluid extract of ergot each day for eighteen days, then every second or third day for ten times more, at the end of which time the metrorrhagia had ceased. She has taken ergot irregularly, by the mouth, ever since, although there have been no indications of hæmorrhage. Menstruation is regular and free but not abnormal; general health excellent.

Case 3.—In May 1888, I was called to see Mrs. T. She was then in her 42nd year; had always lived on a farm; had borne nine children; the last two years previous. Menstruation had been unusually profuse since that confinement, except during the last three months, when it had been suppressed.

On the day I was called, profuse hæmorrhage had begun, and in a short time after my arrival she had a miscarriage, of twins, at about the third month. Hæmorrhage was very free but was controlled after the womb was emptied. Shortly after her recovery from the miscarriage metrorrhagia set in, which was not controlled by the free use of ergot, by the mouth. About three months after the miscarriage, I made an examination and found a hard tumor about the size of a child's head, in the right lateral wall of the womb. By using an aspirator needle I was enabled to inject into its substance one-half drachm doses of fluid extract of ergot, which I did once a week for nearly five months; this kept the hæmorrhage under control during this period. At the end of this time the tumor was found to be submucous, lifted up on a thick peduncle and protruding itself through the mouth of the womb. In January, 1889, five months from the time the injections were begun, I removed the tumor with an écraseur. It was so large that the wire would not reach over it, so I was compelled to take it away in three portions; hæmorrhage was not serious. The vascularity of the tumor had evidently been greatly lessened by the injections of ergot. The substance of the tumor was soft and friable and would probably soon have broken down in suppuration in a short time.

I have not observed any serious effects resulting from these injections; in a few instances a slight chill accompanied by moderate fever followed the use of the syringe; but these symptoms subsided in the course of a few hours. I have employed this method of treatment in several other cases with similar results, so far, but they are still in hand.

The most convenient instrument with which to administer the injections is the ordinary hypodermatic syringe with a long needle.

In a few instances I have used a small aspirator as a syringe. The injections are always given through the vagina. I attempt to place the ergot as near the center of the tumor as possible.

THE STRUGGLE FOR LIFE AT THE WRECK OF THE "UTOPIA."

In *The Times* of March 25, there appears from an officer on board the *Anson* a most graphic account of the *Utopia* disaster, evidently written while the terrible scene was fresh in his memory and its horror still vivid before him. While the officers of H.M.S. *Anson* were dressing for dinner the "officers' call" sounded, and all were speedily at their posts. The *Utopia* was sinking fast, and the waves washing over her were sweeping away people by dozens into the sea around. Every wave that passed over the ship lessened the numbers struggling for life. There was one man hanging by one leg to some rope aloft quite dead and nearly naked, and around were others clinging and shrieking for help. Another man had lashed himself to the sails for security, and was drowned standing up, while some of those free, and apparently in greater danger, were saved. One poor fellow, when the *Utopia* first sank, got so excited that, crying out "Oh! I can't stand this," he jumped overboard. The cold water brought him to his senses, and he was picked up and saved, but he had no recollection of what he did. Here is an instance of the effect of shock on the senses suddenly depriving the individual of the power of using them even to save his own life. We are apt sometimes to under-estimate the effect of shock in accidents less appalling, and it is only by such a circumstance as is here described that we can judge by comparison of those lesser instances of shock to the nervous system, which we are so often called on to relieve or to estimate the bearing of with regard to the future life of an individual; especially is this so in railway accidents, in which shock to the nervous system often forms the most serious part of the injury.—*The Lancet.*

THE
Journal of the American Medical Association
PUBLISHED WEEKLY.

SUBSCRIPTION PRICE, INCLUDING POSTAGE.
PER ANNUM, IN ADVANCE $5.00
SINGLE COPIES . . . . . 10 CENTS.

Subscription may begin at any time. The safest mode of remittance is by postal or express money order, drawn to the order of THE JOURNAL. When neither is accessible, remittances may be made at the risk of the publishers, by forwarding in REGISTERED letters.

Address
JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION,
No. 68 WABASH AVE.,
CHICAGO, ILLINOIS.

All members of the Association should send their Annual *Dues* to the *Treasurer*, Richard J. Dunglison, M.D., Lock Box 1274, Philadelphia, Pa.

LONDON OFFICE, 57 AND 59 LUDGATE HILL.

SATURDAY, JUNE 27, 1891.

PRESENT ASPECTS OF DISINFECTION.

MR. WYNTER BLYTH has lately addressed the Society of Medical officers of Health of England, regarding the latest improvements in disinfection. He finds that the basis of the scientific use of disinfectants is changing year by year as our knowledge of disease causation advances. At the beginning of the last decade, when the first results began to be revealed as to the relation of microörganisms to disease, it was the general inference that pathogenic microbes, or those concerned in the propagation of diseases of an infectious character, were almost wholly those of the sporogenic type, and that since the spores of all such organisms are possessed of a high degree of inherent vitality, no so-called process of disinfection could be considered adequate and thoroughly efficient which did not have the power of destroying the vitality of the spores of the bacillus anthracis, the most resistant of them all. More recently, however, the field of vision has been clarified and it is no longer necessary to assume that there is the same degree of vitality in all specific disease-germs as exists in that of anthrax. By degrees the pathogenic microbes of very many of the specific infectious diseases have been identified and shown to be non-sporiferous, as in the case of the well-known forms of cholera, uteric fever, erysipelas, septicæmia and epidemic diarrhœa; have been shown to occur as bacilli, streptococci or micrococci and to be very feebly resistant to heat and chemical agents. In this new view, therefore, it has become unnecessary to have recourse to those powerful chemical substances, the use of which was attended by obvious practical difficulties. In a paper before the Royal Society, MR. BLYTH has already pointed out the important relations of temperature, space and time as factors in the contest with the germs of disease, showing that under appropriate conditions, even such simple means as lime-washing and æration were competent to remove infection. BEHRING and PFUHL have recently published an account of their experiments with lime, showing its efficacy. BOER has observed that while the addition of very small quantities of lime to culture fluids favored the development of bacteria, larger quantities—as well as equivalents of potash or soda, producing an alkaline reaction, equal to what is known as 50° of normal acidity—were speedily destructive to all pathogenic microbes, in any other form than that of the spore. Hence we learn that the old-fashioned soft soaps, strongly charged with alkali, are in many cases far better germicides than the much-vaunted soaps of carbolic acid, thymol, and terebene; and that the stripping of the wall-paper, lime-washing the walls and ceiling, and the scrubbing of the wood-work with soft soap may be relied upon as generally sufficient for the disinfection of rooms or wards that require cleansing. Lime also becomes useful from its absorbent property, taking up, as it does, the sulphur compounds and other offensive gases, without itself becoming offensive; it is especially suitable in regard to the handling of disinterred bodies and for the purification of the contents of street gutters, and in nearly all cases where it will not cause the evolution of ammonia. Dr. TYKES, of London, has reported his experience of the immense value of quicklime in the removal of over two thousand bodies, and many thousand tons of very offensive soil, from a cemetery in the parish of St. Pancras to an extramural burial-place; as fast as the ground was opened, quicklime was thrown in and the stench at once ceased; the coffins were placed in larger wooden cases with a plenty of lime and, at first, lime was spread over the surface of the loads of offensive earth, after the carts were loaded, but some complaints having been made by citizens along the line of streets through which the carts were driven, he substituted a top-layer of clean earth, when no more complaints were sent in; this cemetery had

been closed for twenty years and the condition of putrefaction in the bodies were so variously and markedly offensive that without the lime the removal would have been well nigh impracticable. For the disinfection of mortuaries lime may be used, but some health officers give a preference to a fifty per cent. dilution of the Burnett fluid, which is a solution of zinc chloride, containing four per cent. of the chemical. In the disinfection of sick-rooms, sulphur fumigations have had a variable reputation, and while they should not be allowed to supersede lime washing and the alkaline scrubbings, they should still be regarded as a serviceable addition to those measures. For the deodorization of excreta and stable refuse, the acid sulphates, which would fix the ammonia and at the same time not detract from the value of the fertilizer, have the preference over carbolic powders, but there are many sanitary officers who adhere to the use of solutions of corrosive sublimate, especially for the disinfecting of enteric excreta. Touching the disinfection of fomites by heat, DR. BLYTH insisted that all recent researches tended to show that time was a most important factor. Given an indefinite period of time, comparatively low temperatures have been found effective, and intermittent heatings below 212° F. may very well be employed in the purification of those articles, such as kid gloves, which are damaged by higher temperatures. In the refuges established last winter in Berlin, the use of a steam-chamber was relied upon for the disinfection of the clothing of the lodgers, while the persons of the latter were being treated to a bath; and recent German researches appear to establish the superiority of current steam over pressure steam, the steam being admitted at the upper part of the chamber and its temperature observed at its point of exit below. In regard to the carriage of infection by persons who are convalescent from infectious diseases, the discovery of Oertel must not be forgotten. He reports that he has found the bacillus of diphtheria in the throats of patients even as late as three weeks after recovery and discharge from attendance. It is possible that a like condition may obtain after scarlet fever and may explain the propagation of the disease by discharged patients notwithstanding the careful exercise of every ordinary precaution of disinfection, clothing and persons at the time of their discharge.

A NEW THEORY OF "URÆMIA."

There is no more obscure subject in pathology, than the various clinical phenomena grouped under the general head of uræmia. Of all the theories that have been advanced, it must be confessed that none of them offer a complete explanation of its varying conditions.

For years the most generally accepted doctrine, and one that contributed the name to this symptom complex, regarded it as simply due to an excess of urea in the blood; this view was then followed by that of FRERICH'S, who taught that carbonate of ammonia was the toxic substance. Further observations gave the *coup de grace* to these earlier views, and apparently demonstrated that various excrementitious substances such as xanthine, creatin, etc., were the morbid agents. Perhaps the most generally accepted view now (JACCOUD), is that any or all of these substances may be present, and in part responsible. The most striking fact against the acceptance of the view that uræmia is dependent upon the retention of normal excrementitious substances in the blood, is that animals or man suffering from fatal obstructive suppression of urine present a very different clinical picture from those affected with uræmia, the result of Brights' disease. This has given rise to the theory of REESE, which has been accepted in part by MAHOMED, that the phenomena of uræmia were dependent upon capillary hæmorrhages or serous effusion, due to changes in the blood and altered vascular pressure. It is obvious, however, that these same changes, may be, and often are, present in other diseases, that are never attended by coma and convulsions.

Perhaps the majority of clinicians incline to the view that this condition is essentially a toxæmia, though the exact nature of the offending substance has not been determined. Heretofore all researches have been conducted upon the theory that it was some substance, either changed or unchanged, that is under normal circumstances excreted by the kidneys.

Recently Dr. C. J. RADEMAKER (*Amer. Prac. and News*), May 9, 1891, has announced the discovery of a crystalline organic compound, differing from all constituents of normal urine, that he has uniformly found in albuminous urine. This substance upon ultimate organic analysis was found to have the same formula as urethane,

and to present the same general chemical reactions. As the writer points out, urethane belongs to the class of narcotic poisons, and he suggests that uræmic symptoms may be due to the presence and retention of this toxine.

Whether in this discovery we have at least cleared up the doubtful pathology of uræmic coma, remains for further observation and study. Certain it is that it suggests a new line of inquiry that *apriori* is full of promise, and one which, apparently, is capable of reconciling the wide variation in the observed symptoms in acute urinary suppression and Bright's disease.

FOURTH OF JULY SURGERY.

The usual number of Fourth of July accidents may be expected this year, especially in the large cities and among our patriotic boys from ten to sixteen years of age. In former times, the toy cannon used to figure very largely in the etiology of the injuries liable to keep the practitioners busy on the great holiday, but during recent years the giant cracker has forced its way to the front as the champion among dangerous playthings. The injuries inflicted by these crackers very commonly have their situation in the right hand, splitting open the thumb, at or near its base, and causing a compound dislocation of the proximal joint of the first metacarpal bone, tearing the latter away from the trapezium, so that the thumb and its metacarpal are connected with the hand only by the soft parts. Sometimes the explosion affects the ungual phalanx, severing it from the hand. In the report of the surgical work performed at the Boston City Hospital on the Fourth of July, of last year, there were twenty-one cases brought to the hospital as the result of explosions, the majority of which were due to the giant firecracker.

PURE CULTURES OF THE GONOCOCCUS.

Von Schrotter and Winkler report that they have recently employed plover's egg albumen in the cultivation of the gonococcus of Neisser. The coccus is obtained from the urethra with all possible precautions. The glans is first washed with alcohol and corrosive sublimate, then some of the infected pus is conveyed by a sterile needle to the coagulated albumen. The culture is placed in a brood oven at a temperature of 38° C. At the end of six hours a thin, whitish, transparent layer appears, that extends itself rapidly over the albumen. There is some growth at ordinary temperatures, but it is much less. Experiments with egg albumen of the common fowl were negative. *Centralblatt für Bakteriologie und Parasitenkunde*, May 23, 1891.

(It is to be regretted that some more readily obtainable culture medium was not found than plover's egg. Still, even with this disadvantage, it is to be hoped that pure cultures of the gonococcus may materially advance our knowledge of this important inficiens.—Ref.)

MEDICAL EDUCATIONAL INTERESTS.

The following circular has a melodious ring that clearly says: Attention, right dress, forward march. Straggling and getting out of line are strictly forbidden:

State Board of Health, Kentucky,
June 19, 1891.

To the Editor:—I am instructed by this Board to transmit to you for publication the following self-explanatory resolution, which was adopted at its recent meeting held in Louisville:

Resolved, That the Secretary be instructed to place upon the list of medical colleges whose diplomas are to be certified and endorsed for registration under the laws of this State only such colleges as shall, after the session of 1891–2, exact of matriculates and candidates for graduation a minim of requirements not less than those required by the American Medical College Association.

Very respectfully,
J. N. McCormack, Sec'y.

ACKNOWLEDGMENT.

For the many generous expressions of goodwill on the part of the editors of almost the entire medical press of this country, as well as from an army of friends of The Journal, we express our most hearty appreciation, and very warmest thanks.

The Journal of the American Medical Association is neither the rival nor antagonist of any part of the medical press, but in all good work for the elevation and betterment of our profession in every section of our country it may be counted upon as giving a strong support, and in utterances of no uncertain sound. Whether

we are able to realize the exalted hopes which have been so lavishly expressed or not, our friends may rest assured that we are here to do our level best to promote every laudable interest and purpose of the medical profession. In such generous, out-spoken expressions of support and tender of aid as have come to us, we recognize a determination to place this Journal away in advance of its present status, even to the making it the largest and best of its kind.

EDITORIAL NOTES AND ITEMS.

THE FRENCH-CANADIAN INVASION OF NEW ENGLAND.—There has been established a new medical journal in French, edited by E. Sirois, M.D., of Three Rivers, Mass. It is the official organ of the *Société Medico chirurgicale Canadienne-Francaise de la Nouvelle Angleterre*, that was founded in Worcester, Mass., in 1887. The membership now numbers over thirty, mostly from Massachusetts.

DR. ALT'S CONNECTION WITH THE ST. LOUIS MIRACLE (!) :—The so-called "miraculous" case of Sister Mary Philomena at St. Louis not long since, and with which it has been reported that Dr. Adolph Alt, editor of the *Journal of Ophthalmology*, was in some way professionally connected, is disposed of by Dr. Alt in the current issue of the journal over which he presides.

Dr. Alt denies in unequivocal terms having any connection with, or knowledge of, any miracle. Dr. Alt said he was called upon one occasion—previous to the reported miracle—and found a congested upper eyelid in the patient, with a history of bleeding from the part—presumed hæmophila. He then adds: "This is all I know of the miracle case. I saw the Sister only that once. I did not do anything for her. I had nothing to do with the subsequent alleged miracle, and could, therefore, not vouch for it, even if I believed it."

THE BRITISH MEDICAL ASSOCIATION.—The fifty ninth annual meeting will be held at Bournemouth on Tuesday, Wednesday, Thursday and Friday, July 28, 29, 30, and 31, under the presidency of Willoughby Francis Wade, B.A., M.B., F.R.C.P., J.P. The address in Medicine will be delivered by T. Lauder Brunton, M.D., F.R.S.; the address in Surgery by John Chiene, M.D., F.R.C.S., Ed.; the address in Public Medicine, by Edward Cox Seaton, M.D.

The scientific work is divided into nine sections, viz., Medicine, Surgery, Obstetric Medicine and Gynecology, Public Medicine, Psychology, Pathology, Ophthalmology, Diseases of Children and Therapeutics, and already an average of eight papers in each section has been announced.

A brief description of the place of meeting will be of interest, especially to those who have lately enjoyed the beauties of our National Capitol at the meeting of the American Association.

Bournemouth is a happily situated watering-place on the southern English coast. A valley of about two miles or more in extent, beautifully cultivated, and through which winds a small stream, gives a place for pretty homes, and one of those quiet English towns so famous in the literature of the country—the literature of the English-speaking world.

A broad beach of white sand, wooded hills, the sparkling sea; together with the calm, joyful surroundings made by the hand of man, and the smile of the summer's sun, should all conduce to the success of the occasion, and we doubt not that such will be the case. Various points of interest and pleasure are within easy distance, and excursions have been arranged, giving, therefore, a decidedly sociable trend and interest, other than purely scientific, to the gathering.

MEDICINE VS. SURGERY.—Viewing the height to which the science and art of Medicine and Surgery is advancing, and the struggle of both branches to attain the higher meed of praise; looking over the whole field of progress and possibility through the glasses of "A Quinquennial Retrospect," Dr. Grigg, in an inaugural address before the British Gynecological Society, said: "The greatest operative skill that ever man possessed must pale before the discovery of a drug or of an agent which can arrest or destroy the effects of pathological changes. We are on the threshold of great discoveries. Another century will not pass without increasing our therapeutical resources at the expense of the surgeon's art."

ARTIFICIAL INFANT FOODS.—Dr. C. W. Earle, of Chicago, maintains strongly against the prepared infant foods—the commercial foods so much

advertised and used. Above all else, of course, he contends that the mother's milk is the food *par excellence* for the infant's stomach and bowels. If this is not of sufficient quantity, then a prepared food may be resorted to only to fill out the deficiency in quantity. If it becomes *imperative*, then a prepared food may be wholly used. Condensed milk, properly diluted with rice-water or toast-water, *and sterilized*, has been used under his care with the best results. He strongly advises the sterilization of all infant artificial food, and the use of the improved "feeders." The old-time nursing bottle he denounces as a thing of evil.

A Viable Child at Six and One-Half Months.—Dr. Herman L. Collyer reports (*Arch. of Gynecology*, June, 1891) a child born before six and one half months of uterine life had been reached. The dates were well distinguished; that is, the time of conception was well ascertained, and the progress of the case from such time was carefully watched. At birth the child weighed two pounds and two ounces. The finger-nails were just beginning to show, while the toe-nails had not yet shown development. The cranial bones were soft, the sutures overlapped, while the frontal suture was open. The child immediately after birth was carefully wrapped and nursed, and continued to live.

Viable children at this age are very uncommon, and even when one is reported, the chances of an error in calculation render it difficult for positive statements.

The Composition and True Nature of Tuberculin.—It is said that Prof. Koch, having returned to active laboratory work at Berlin, will soon announce full particulars regarding the preparation and essential characters of tuberculin.

The St. Louis Surgical Society.—This is the title of a new organization of the working members of the profession in St. Louis—those working members to whom surgery has made an especial appeal, and who feel called upon to reply with their choicest gifts and the day and night toil of their minds and hands.

The American Society of Microscopists.—This Society will meet at Washington, D. C., August 11. In 1878 the first organization was effected, beginning with about seventy-five members. Since then it has grown until now its membership list shows upwards of four hundred names. Yet the number is not what it should be, and a plea has been presented by the Secretary for more interest—for a larger list of members, and an increased activity on the part of those already belonging to the body.

The indispensable value of the microscope to medicine, together with the fascination of the study, should invite many physicians to show their zeal along this line by rendering such assistance as is within their power to this National organization.

Advanced Surgery.—M. Figueira, M.D., of New York City, believes an operation for foreign bodies at or below the bifurcation of the trachea can be made from the posterior thoracic region—between the posterior scapular margin and the vertebra. He is convinced that vital structures could here be avoided and the roots of the lungs reached. The sad case of the Rev. Dr. Bothwell, regarding which the country is aware, has prompted him to undertake experiments, the results of which he promises soon to make known.

DOMESTIC CORRESPONDENCE.

Tuberculin.

To the Editor:—I note the report of Dr. Joseph Jones, of New Orleans, La., upon the analysis and examination made by him of Professor Koch's lymph, now called tuberculin, which appeared in your issue of May 30.

Without in the least desiring to appear as the champion for the lymph, the extraordinary statements made by Dr. Jones in this report, led me to reply to his claims of having found living tubercle bacilli, or at least such as resembled and behaved similar to the bacilli of tuberculosis.

Many similar analyses have been made and published before and since Dr. Jones began his investigations, but strange to say in none of the numerous experiments made in the physiological and bacteriological laboratories of Europe and other countries have ever any living germs been found to be present in the fluid.

Dr. Jones says, that upon the dilution of the lymph with boiled distilled water and preserved in chemically clean test tubes, the fluid became turbid, and that microscopic examination showed the turbidity to have been due to the multiplication of organisms presenting the physical and chemical properties similar to those of the bacillus of tuberculosis.

He does not state the degree of dilution and the length of time it required for the turbidity to occur. Boiled distilled water may and may not be sterilized

water, and chemically clean test tubes, may not be sterilized and may not be clean in a bacteriological sense. Neither does he show that the turbidity could not also have been due to the development and growth of the germs.

The care and facilities for correct and unassailable investigations in these matters are such, that a lack or the slightest deficiency in either direction would make any conclusions certainly very doubtful, if not valueless. I have myself kept such a 10 per cent. solution for over five months, and without all the precautions necessary to prevent error, and the fluid has not become turbid, neither can the most careful examination show the presence of bacilli, dead or alive. I have kept half, 1 and 5 per cent. solutions without especial precautions for a number of weeks and they were perfectly clear at the end of such time.

Now as to the results of culture as obtained by Dr. Jones they are certainly remarkable, and it would be of the greatest interest if the report contained exact data of the steps and modes of his procedures, the way in which the culture media were prepared and kept after inoculations, and the time and the precautions under which he made his final examinations.

Dr. Jones being until now a stranger in the field of experimental bacteriology, it would not be unreasonable to ask of him evidence for the remarkable statements which he makes, the more so inasmuch as men who have at their command the perfect equipments of bacteriological laboratories of Europe and other countries, and who have earned a world-wide reputation in this special field of scientific labor, and who have made similar investigations with Koch's lymph, have never found any tubercle bacilli capable of growth and multiplication, in that fluid.

That the lymph contains dead or inert bacilli has been well known since the first introduction, and can be found especially in the sediment of occasional specimens, but heretofore, so far as I know, all culture and inoculation experiments have failed, and from the mode of preparation we must expect them to fail, if no germs are admitted by error or oversight from without. These dead bacilli, are, however, not found so plentifully even in the sediment from a bottle of tuberculin as one might suppose from Dr. Jones' report; only here and there we find a bacillus in the field, and more often none at all. Their presence and inertness were known to Professor Koch and his associates, from the beginning has been referred to in the medical literature again and again, and the mode of preparation with prolonged exposure to intense heat of the fluid, and its preservation in glycerine after filtration through porcelain, is a sufficient guarantee that we have nothing to fear from them. Moreover, every vial before being sent out of the laboratory is especially tested and examined.

Dr. Jones should or could have known of the presence of inert bacilli, and of the negative experiments of other experiments before he undertook the examination of the vial submitted to him, and certainly before he published his report.

This question, which in Europe finds now no further attention, having come up in America, it would certainly be interesting if Dr. Jones would repeat his experiments, and, if from the same sample some well known bacteriologist, as for instance Professor Sternberg, or Ernst, could be induced to make control experiments, for such matters require to be definitely settled in the interest of science as well as that of the profession and patients.

It is certainly not intended that living tubercle bacilli should be contained in the tuberculin, and contrary to Dr. Jones' conclusions its action does not depend upon their presence, and this Dr. Jones must also have known when he made his report. To me his concluding remarks are entirely unnecessary or hardly in good faith when he refers to the remedy as a secret medicine, Dr. Koch having given the temporary secret of its source and composition to the world before Dr. Jones came into possession of his vial. In the meanwhile those who use the remedy, if influenced by Dr. Jones' report, can make assurance doubly sure, by subjecting every solution for clinical use to prolonged boiling, which in no wise interferes with its action, and which I, and as far as I know, others who have applied it, have always done.

The addition of ½ per cent. of carbolic acid can also be increased to any desired strength, as for instance, the 10 per cent. solution of tuberculin which we make from the original vial can contain 5 per cent., or 50 per cent. of carbolic acid may be added to the lymph, and its 1 per cent. solution would then still only contain ½ per cent. of carbolic acid as originally intended.

I here also found that tuberculin solution containing as much as 1 or 2 per cent. of carbolic acid crystals are not specially painful or objectionable for hypodermic use. There can be no doubt, that the preparation of the tuberculin is in reliable hands, and that any findings justifying even the remotest suspicion as to the presence of active tubercle bacilli or other microörganisms would promptly lead to a revision of, and increased precautionary measures in its preparation, for indeed, it cannot be a matter of great difficulty to sterilize the remedy, and control experiments are daily being made in the laboratory of its production.

Respectfully yours,

KARL VON RUCK, M.D.

Winyah Sanitarium, Asheville, N. C., June 3, 1891.

Vote of the Missouri State Medical Association upon the "Three Years Course."

To the Editor:—As a part of the medical history of the West, the attitude of Missouri towards the great question of educational reform now agitated all over the country, must attract general interest. In THE JOURNAL, April 11, 1891, an account was given of the history of the Three Years' obligatory Medical Course Bill in the Missouri Legislature: Indorsed in a memorial by 1,700 doctors from all over the State, and by a large majority of the fourteen medical colleges chartered by the State, the Bill was unanimously recommended for passage by the committees of both House and Senate. The House passed the Bill by a vote of 85 to 22; it came before the

Senate during the last hours of the session, and was defeated by a vote of 5 majority—a number of the Senators had already gone home, including friends of the Bill. A more flagrant violation of the principles of democracy and defiance of the will of the people, can hardly be instanced. At the annual meeting, May 20, of the Missouri State Medical Association, the following resolution was introduced:

That the Association urge upon the State Board of Health that it define the statutory phrase "college in good standing" (as affecting the value of diplomas shown by applicants for license to practice medicine), to apply only to such colleges as require attendance upon three annual courses of lectures and clinics, of six months each, and that a copy of this resolution be sent to the Governor of the State, and to the State Board of Health.

This emphatic resolution was adopted by a vote almost unanimous, after all had time to take part in the discussion. Thus the representatives of the profession in Missouri have placed the State absolutely on record as desirous of the reform, and at the same time, they have put the stamp of their condemnation upon those who, through political juggling, have for the moment defrauded the State of necessary legislation, and betrayed the cause of science and of the people.

As proof of the complete unanimity of opinion in the State upon this subject, the homœopaths, in convention at Kansas City, April 22, passed a resolution identical in spirit with the one above given. The following is taken from the organ of the eclectics, the *American Medical Journal*, St. Louis, April, 1891:

"In the Senate it (the Three Years Bill) was defeated. This strange procedure may be understood in this way: If the Bill had passed the Senate, the Governor would have to sign or veto it. To veto would have incurred the displeasure of the great majority of physicians throughout the State, as well as that of the Senate. It would not have been the policy under the existing crisis. To sign the Bill would have offended some *special* friends."

That the influence of politics upon science is notoriously harmful, the events briefly summed up in this communication afford one more glaring illustration. Respectfully, CHARLES A. TODD, M.D.

Chairman Com. Scientific Communications, Missouri State Medical Association.

St. Louis, June 6, 1891.

FOREIGN CORRESPONDENCE.

LETTER FROM LONDON.

(FROM OUR OWN CORRESPONDENT.)

In several instances of late pneumonia has been most successfully treated by large doses of digitalis. By some medical men the expectant method of treating pneumonia is thought to be not only irrational, but even dangerous, and that the assumption that there is a definite cycle of progress in pneumonia is not warranted, and from experience obtained at the leading London hospitals, the disease may be jugulated or cut short by an energetic, rational mode of treatment, especially if the method is inaugurated at the onset of the disease, and that, finally, the claim is supported that the treatment of pneumonia with large doses of digitalis promises better results than those obtainable by any other mode of procedure.

Dr. Steele has drawn attention to some useful precautions in the extraction of broken needles. He says that it is most unpleasant, after cutting and probing with the fingers and forceps, to be obliged to tell a patient that further attempts are useless, and that the fragment is still there. The plan he adopts is very simple, painless and reliable. In the first example which he gives, the patient, a young lady, had been unable to rest her left foot on the floor in walking for some weeks, as she had broken a needle into her left heel, and the slightest touch gave great pain. The point of entrance was visible in the middle line, over the os calcis. The end of the needle could be recognized through the skin, but the slightest pressure caused it to recede. Dr. Steele applied two thick felt corn plasters, one on the other, with the puncture occupying the central hole, and ordered the patient to walk freely and bear well upon the heel. This she did with perfect ease, and after ten days the needle presented and was easily withdrawn. Dr. Steele points out that the ball of the thumb and the wrist are not unfrequently punctured, and if the fragment enters obliquely, and lies close to arteries or nerves, and cannot be forced into prominence, attempts at extraction are undesirable, whereas by adopting this simple method, and producing pressure with an elastic ligature or light steel spring like a small truss, the fragment will work out, and not give pain from any knocks while under the skin.

Sir Arthur Mitchell and Dr. Buchan have discussed the influenza epidemic of the first three months of last year in a paper on "Influenza and Weather of London," published in the latest issue of the journal of the Scottish Meteorological Society. In the forty-five years from 1845 down to the end of March, 1890, the total number of deaths attributed to influenza registered in London was 4,690, an average of 104.2 per annum. It will surprise many that, strange as the epidemic was thought to be during its advance from the East towards the close of 1889, deaths from this particular malady have been registered in London every year from 1845. There were in all five epidemic outbursts, viz.: December, 1847, to April, 1848, 1,631 deaths; March to May, 1851, 258 deaths; January to March, 1855, 130 deaths; November, 1857, to January, 1858, 123 deaths; and January to March, 1890, 545 deaths. These visitations, therefore, cost 2,687 lives, leaving 2,003 to be distributed over the non-epidemic forty years. Latterly there was a great diminution of the yearly totals, the six years to the close of 1889 having only twenty-five deaths between them. The distribution of the deaths over the fifty-two weeks of the year shows that the numbers registered in the three months, December to February, were enormously in excess of those registered from May to September, so that there was a strongly-marked winter maximum, and a summer minimum. A secondary maximum was also shown towards the end of March and beginning of April. The authors enter into details connected with the five epidemics, and decide that, although the visits occur generally in the

winter months, they are not related to very cold weather, but to periods of high temperature which manifests itself both before and during the visitation. Information has also been collected bearing upon eighteen other influenza epidemics between the years 1510 to 1637, but as to most of them, owing to the imperfect nature of the records, there was little if any real value that could be ascertained. They were made up of winter, spring and summer epidemics, the weather being of a very varied description; the 1762 visitation being accompanied by unseasonable and intolerable warmth, and the summer epidemic of 1767 being preceded by uncommonly cold weather. So far as can be gathered from the records from 1658 to 1890, the complications and sequels which result from winter attacks appear to be chiefly diseases of the respiratory organs and circulatory systems, the nerve centres having a tendency to be more affected by the spring than by the winter epidemics, while summer influenza induces a prevalence of diarrhœa, coincidently and subsequently. The epidemic of 1831 was the only summer one of the present century.

A German medical man has noticed, in a great number of cases, that tuberculous granulations completely disappear if the wounds be thoroughly covered with fat. This has led him to the thought that in many infectious diseases, the mechanism of the taking up of microbes by the white blood corpuscles or leucocytes sufficed to explain the curative influence of various agents. Restoration of cells and avoidance of injury to the tissue is especially to be regarded, he says. If now the leucocytes can be increased in the tissue itself, without the latter being affected, certainly the diseased condition will be altered for the better. The remedy must be taken up by the leucocytes in the same manner as bacteria are taken up. As regards fat, this process is thought to be best obtained by the free use of olive oil.

A special Indian Committee has been formed in connection with the International Congress of Hygiene, to be held in London, under the presidency of the Prince of Wales. Sir Douglas Galton is chairman of the organizing committee. Dr. Claye Shaw has contributed a highly interesting memoir to the new volume of the St. Bartholomews' Hospital Reports under the title "Fractured Ribs in the Insane." In his endeavor to throw some light on the pathology of broken ribs in the insane, he has made experiments as to the weight required to cause fracture of the rib. He has come to the conclusion that a considerable difference exists not only in the weight of the ribs on the two sides of the body, but also in the average breaking weight. He has frequently found that a tight rib will bear the heavier weight, and also that there is no proportion between the weight of the rib and the number of pounds that it is capable of sustaining, therefore it is probable that physical conditions of structure have more to do with the strain-resisting power than chemical change. Dr. Shaw has also noted that patients suffering from advanced phthisis, frequently have ribs that support a strain much above the average, whilst persons suffering from disease of the heart or blood-vessels invariably bear less strain than others. When a fracture is caused by a blow, it is dependent not so much on the weight of the rib and its power of bearing strain as upon other conditions. Dr. Shaw does not agree with the idea that the ribs of the insane are generally more brittle than those of the sane. Where extreme brittleness does exist it is almost confined to those affected with degeneration of the circulatory system.

Mr. George Holt has sent the council of University College, Liverpool, £10,000 for the endowment of a chair of physiology. It has been decided to request Mr. Holt to permit his name to be permanently attached to the professorship. The present holder of the chair has sent a letter resigning the position in consequence of increasing work of other kinds.

Dr. Alexander Fraser's new "Guide to Operation of the Brain," contains photographs of the human brain which have been made upon the following plan: After suitable hardening and preparation the head was photographed, and then dissected layer by layer, each layer being photographed in its turn. Further, the art of composite photography has been utilized, so that one is enabled to gaze through the shadow of the superficial structures upon those which are deeper. Thus at a glance the clearest notion of the position of the convolution of the island of Reil, of the cornua of the lateral ventricles of the corpus stratum, can be obtained, each in their respective relation to the surface.

G. O. M.

BOOK REVIEWS.

PRACTICAL POINTS IN THE MANAGEMENT OF THE DISEASES OF CHILDREN. By I. N. LOVE, M.D. The Physician's Leisure Hour Series. Detroit: Geo. S. Davis.

The author states the *raison d'etre* of this little volume is to group together a number of practical points pertaining to various disturbances of childhood which have come under the direct observation of the writer. It is not advanced with the idea of completeness, nor to take the place of the various larger works; it is rather to supplement them, as it contains many excellent and practical suggestions that will be looked for in vain in more ambitious treatises. The work bears abundant evidence that it was written by one enthusiastic in his subject, and almost wholly from the standpoint of personal observation. Whatever has been gleaned from other writers has been sublimed in the crucible of experience, and received the stamp of the writer's originality and and experience.

In a book bristling with good points, it would be perhaps invidious to single out some for special mention, but we cannot let the occasion pass without referring to the close of the chapter on artificial feeding, in which the writer says: "We must always bear in mind that every baby, like

every other individual, is a law unto itself, and there can be no stereotyped rule for the artificial feeding of infants." Again, under the general chapter, we find the following: "We should make it the object of our lives to teach the parents of the children under our care that an indefinite amount of prevention is better than an indefinite amount of cure. Every day's sickness checks the proper development of the child, aiding in the direction of a delicate organization rather than a strong one."

The work is excellently arranged, easy of reference, and has a good index.

DE LA TUBERCULOSE MAMMAIRE. Par le DR. ADRIEN W. ROUX. Genève: Henri Stapelmohr.

This small monograph on tuberculosis mammæ is an example of useful compilation. While it adds nothing especially new, yet it arranges and classifies our knowledge of a particular subject in such manner that it is readily accessible.

The work is divide into two portions. The first deals with the history, etiology, pathological anatomy, symptomatology, diagnosis, prognosis and treatment of the affection. The second part consists of an abstract of thirty-one previously published cases, to which the writer has added three observed by himself. The work is illustrated by three excellent plates, one of which is colored.

THE INTERNATIONAL MEDICAL ANNUAL AND PRACTITIONER'S INDEX; A WORK OF REFERENCE FOR MEDICAL PRACTITIONERS. Ninth year. 1891. Forty eminent contributors.

The present volume, from the well known house of E. B. Treat, New York, 5 Cooper Union, and Chicago, 199 Clark street, fully maintains the hitherto well earned reputation of this series of annuals. The present work contains about 600 pages octavo, and is afforded at the remarkably low price of $2.75.

Part first contains a review of the therapeutic progress for the year 1890, by Percy Wild, M.D. Antipyretics, hypnotics and analgesics are well considered, the first fifty pages of the work being devoted to the discussion of new remedies.

The body of the work is given to the consideration of diseases, the subjects being arranged, alphaberically, and the recent and most accepted methods of treatment are briefly given.

This feature of the work renders it especially valuable to the busy practitioner as a book of ready reference, and at a small cost adding much valuable information on a great variety of subjects for the use of those whose means and libraries are as yet limited.

Among the subjects which are considered as monographs, and which will repay perusal, are "The Motor Centres of the Brain," by W. H. Elam; "The Diagnosis of Functional and Organic Diseases of the Heart," by Drs. Leaming and Jackson, of New York; "The Sputa as a Means of Diagnosis," by Dr. F. J. Wetherd; "The Hand as a Diagnostic Feature in Diseases of the Nervous System," etc.

Chapters upon Sanitary Science, Climatology and Hygiene, Alcoholic Inebriety, Pharmacy and New Inventions conclude the work. As a *résumé* of medical progress for the year it will be found valuable, and will many times repay its cost.

MATERIA MEDICA AND THERAPEUTICS. By JOHN V. SHOEMAKER, A.M., M.D., Professor of Materia Medica, Pharmacology, Therapeutics and Clinical Medicine, and Clinical Professor of Diseases of the Skin in the Medico-Chirurgical College of Philadelphia; etc. Volume II. Phila. and London: F. A. Davis. 1891. Price, $3.50.

This is the second and final volume of a work which has engaged the attention of the author for some time. We have noted quite every page of the volume, and feel pleased and benefited for so doing. As in the first edition of all other efforts, so here there is a demand for the critic's pen. And yet there is not, we confess, that shortcoming we had rather prepared ourselves for. Rapid authorship does not usually conduce to thoroughness, and that weighing of evidence which a medical text-book should have; and for this reason, if no other, we were inclined to be unsparing in search and statement.

To the writer—who has turned almost daily to Bartholow's Materia Medica—the most serious fault in the make-up of Dr. Shoemaker's work, is the absence of an index of diseases.

The amount of space given to prescriptions, and to a description—however brief—of many drugs which were long since obsolete, cannot have our commendation. To the early student, however, we can see where both of these points may be of value.

The alphabetical arrangement of drugs we like. The clear description of the recent remedies makes it at once quite indispensable to the wide-awake and progressive physician.

SEXUAL NEURASTHENIA. By GEORGE M. BEARD, A.M., M.D., formerly Lecturer on Nervous Diseases in the University of the City of New York, etc. Edited by A. D. ROCKWELL, A.M., M.D., Professor of Electro-Therapeutics in the New York Post-Graduate Medical School and Hospital, etc. Third edition. New York: E. B. Treat. 1891. Price, $2.75.

The third edition of a work which has become standard in its line. The subject is one of much importance, though one of difficulty and delicacy. Notwithstanding this, however—the difficulty and

delicacy—Drs. Beard and Rockwell have given the profession a work to which it may refer with a confidence of the latest and most scientific light upon a topic which quackery has forced into undue public prominence.

MEDICAL SYMBOLISM. By THOMAS S. SOZINSKY, M.D., Ph.D., Author of "The Culture of Beauty," etc. Illustrated. Philadelphia and London. F. A. Davis. 1891. Price, $1.

For the student in this line—for he who has time for the less practical side of medicine—interest and profit will follow the perusal of the pages of this little volume. Without attempting to advise the hurried man of to-day, yet we may say that to the average mind a healthfulness of thought obtains from comparisons, even remote though they be; and a comparison between the old—the very old—and the new—between mythology and fact—in the realms of medicine, is afforded in the study before us.

MISCELLANY.

THE PHILADELPHIA POLYCLINIC and College for Graduates in Medicine continues to reach out for additional facilities in the way of study and research for its large class of students. It has just elected five new lecturers. Dr. H. R. Wharton, who is Surgeon to the Children's Hospital and to the Presbyterian Hospital, has been elected Lecturer on Surgical Diseases of Children, a part of his course being Tracheotomy and Intubation.

Dr. C. P. Noble, surgeon in charge of the Kensington Hospital for Women, has been elected Lecturer on Gynecology.

Dr. James K. Young, surgeon to the Orthopœdic Department of the University Hospital, has been elected Lecturer on Orthopœdic Surgery.

Dr. G. Betton Massey, one of the physicians to the Howard Hospital, has been elected Lecturer on Gynecological Electro-Therapeutics, and Dr. Lewis H. Adler Lecturer on Diseases of the Rectum.

Through the recent election of Professor J. M. Baldy, the valuable special field of the Gynecean Hospital has been made available to physician pupils who attend "The Polyclinic." The addition of the above lecturers as an auxiliary to the twenty members of the faculty will make the entire course of instruction cover 150 hours every week, from which may be selected the portion desired by each physician pupil.

THE MISSISSIPPI VALLEY MEDICAL ASSOCIATION will hold its seventeenth annual session at St. Louis, Wednesday, Thursday and Friday, October 14, 15 and 16, 1891. Reduced rates and an excellent programme will bring out a large attendance. The medical profession is respectfully invited. The officers are as follows: C. H. Hughes, M.D., President, 500 N. Jefferson Ave., St. Louis; E. S. McKee, M.D., Secretary, 57 W. Seventh St., Cincinnati, O.; I. N. Love,, M.D., Chairman Committee of Arrangements, 501 N. Grand Ave., St. Louis, Mo.

THE ASSOCIATION OF MILITARY SURGEONS, WISCONSIN NATIONAL GUARD.—The regular meeting of the Association of Military Surgeons of the Wisconsin National Guard will be held in Milwaukee, June 20, 1891. The proposed meeting of the Surgeons of the National Guard of the United States, which was to have been held in Chicago next July, has been postponed until September, 1891. At that time every effort will be made to organize an Association of Military Surgeons of the National Guard.

About four hundred throughout the United States have more than expressed a willingness to attend. Judging from the correspondence so far, the future of the Association will be very bright, and promises to be of much profit and interest to every one.

At its first meeting papers will be read by Surgeon General Bryant, New York National Guard; Surgeon General Yandell, Kentucky National Guard; Surgeon General Senn, Wisconsin National Guard; Surgeon General of Illinois National Guard.

The Association will be entertained in Chicago by the local Guard. (Signed)

SURG. GEN. SENN, W. N. G.,
Pres. Ass'n. Mil. Surg., W. N. G.
ASST. SURG. RUSH CHANDLER, W. N. G.,
Sec'y Ass'n. Mil. Surg., W. N. G.
135 Grand Ave., Milwaukee, Wis.

WHEREAS, Dr. Chas. G. Bacon, of Fulton, N. Y., aged 76 years, and whose connection with the Oswego County Medical Society the records show to have been since the year 1841; and

WHEREAS, the proceedings of this Society show his continued presence and participation each and every year for the past fifty years without a break or excuse;

WHEREAS, He has occupied every office in the gift of this Society, for most of the time being its financial banker and treasurer; therefore, be it,

Resolved, That we round out the semi-centennial of Dr. C. G. Bacon, and declare him most cordially and unanimously elected our Presiding officer for the ensuing year; and

Resolved, That the Secretary be authorized to send a copy of the above to the *Medical Record*, and THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION as a direct challenge to any County or State Society to beat this record.

Official List of Changes in the Stations and Duties of Officers Serving in the Medical Department, U. S. Army, from June 13, 1891, to June 19, 1891.

Capt. Blair D. Taylor, Asst. Surgeon, is granted leave of absence for one month, to take effect on or about the 14th prox. Par. 3, S. O. 65, Dept. of the Missouri, June 15, 1891.

Lieut. Col. Joseph C. Baily, Asst. Medical Purveyor, is granted leave of absence for two months, on surgeon's certificate of disability, with permission to leave the Dept. of Texas, and authority to enter the Army and Navy General Hospital, Hot Springs, Ark., for treatment therein for a period of one month. By direction of the Acting Secretary of War. Par. 12, S. O. 133, Washington, June 12, 1891.

Lieut. Col. James C. McKee, Surgeon, having been found incapacitated for active service, on account of disability incident to the service, is, by direction of the President, retired from active service this date, under the provisions of section 1251, R. S. Par. 4, S. O. 137, A. G. O., June 16, 1891.

Official List of Changes in the Medical Corps of the U. S. Navy, for the Week Ending June 20, 1891.

Surgeon M. L. Ruth, detached from U. S. S. "Newark" and granted leave of absence for six months, with permission to leave the United States.

Surgeon George A. Bright, ordered to the U. S. S. "Newark."

Asst. Surgeon M. R Pigott, ordered to the U. S. S. receiving ship "Independence."

Surgeon Howard Wells, detached from Naval Hospital, Chelsea, and wait orders.

P. A. Surgeon J. M. Steele, ordered to Naval Hospital, Chelsea, Mass.

CORRIGENDA.

In THE JOURNAL of June 13, page 852, second column, the footnotes were transposed, 4 should be 5 and 5 should be 4. On page 854, paragraph 7, line 9, the words windward, and lee were transposed.

In same Journal, on page 844, for John Erety Shoemaker, read George Erety Shoemaker.